THE BUILDER

A JOURNAL FOR THE ARCHITECT AND FOR ALL INTERESTED IN THE CONSTRUCTIVE AND DECORATIVE ARTS.

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THE POST-OFFICE SITE.

THE site for the proposed new Post-Office buildings still fortunately remains a bare area, and so long as this is so there is room for hope that something better may be done with it than is probable if it is left to be treated according to the uncovenanted mercies of official surveyors. Several different points turn upon the treatment of this site, both from the architectural and the road-planning point of view.

In the first place, if the proposed St. Paul's Bridge is ever really carried out—and the formal institution of a competition for its architectural treatment seems to imply that it is seriously intended—a considerable addition of north-going traffic will certainly be turned, past the east end of St. Paul's-churchyard, on to the already congested point between Newgate-street and Cheapside, and the formation of a new north-east road from this point to Liverpool-street Station will before very long become an obvious necessity. Even as it is such a new thoroughfare is very desirable; it would become far more so if a new stream of northward traffic were sent up past St. Paul's, up a street which will have to be widened for the purpose. Under these possible or probable circumstances it is of the greatest importance that the new Post-Office building should not be brought too far south, otherwise it will be found out, when it is too late, that there is no room for the opening into a new north-east street except by sacrificing Wren's church of St. Vedast and passing over its site. It is important therefore that the southern boundary of the new building should be so restricted in its limits that sufficient space for the opening into a new street should be left between the Post-Office building and St. Vedast, the new street opening to the north of the church. We cannot afford to lose another of Wren's churches for want of foresight in planning.

That is one point in the problem—a point partly of street-planning and partly of preservation of an important monument. But there is another purely architectural point to be considered. The new Post-Office and the existing one ought unquestionably to form an architectural group with some definite relation to each other; and for this object it is essential that the southern face of the new building should be in line with the southern face of the Newgate-street building. There is no possibility of making a decent architectural group of the two otherwise. They ought to form together a symmetrical architectural composition; they are two buildings belonging to one department of public work, and should appear to be designed in relation to one another—not necessarily in detail, for something much better than the Newgate-street detail might be hoped for—but in regard to general mass and setting out. In Paris, we feel certain, nothing else would be tolerated in a similar case. And not only is the architectural relation of the two buildings to be considered, but the effect of the vista along Newgate-street. To place the new building projecting southward, beyond the line of the Newgate-street building, would have the effect that in looking along Newgate-street we should see the projecting angle of a building, the rest of which disappears out of sight. Nothing could have a worse effect. An important street should lead up to a central feature of some kind, not to an angle of a building. And that consideration brings up another point not to be overlooked—the aspect of the southern end of the new building as seen coming up the street past St. Paul's-churchyard. This street, if the St. Paul's Bridge is made, will, as already observed, have to be widened, and will become an important though short street; and it is architecturally essential that the southern face of the new Post-Office should be central with the axis of that street, presenting a central feature for the street to lead up to. Hitherto all such considerations have been neglected in the planning of London streets and buildings. It is time they received proper attention.

The proposals of the Office of Works for dealing with the Post-Office site have not yet been published (as they ought to have been), but we are in possession of sufficient information as to them to know that they show a plan *en bloc* in which all the above-mentioned considerations are ignored—have not apparently even been thought of. The new building projects southwards beyond the Newgate-street line, with a large semicircular ending, which has no relation to anything in the other lines of the site, and will not be central with the line of street past St. Paul's, the widened treatment of which is not even indicated, though, of course, the whole scheme of building and street approaches ought, in such a case, to be thought out and planned together, as one idea, to produce an architecturally successful result. A plan more entirely devoid of architectural consideration could hardly be seen.

Moreover, a great opportunity is being lost, in another sense. The official idea is to widen St. Martin's-le-Grand considerably, as the main road northward, thereby further separating the two Post-Office buildings by driving a great and increasing stream of public traffic between them. Surely common sense ought to indicate that, as the ground is now cleared and the new building can be placed in any desired position on it, the sensible and practical proceeding would be to place the two Post-Office buildings closer together, leaving only a loading-yard between them for their own vans, and taking the public traffic in a wide street to the east of the new building. There must be a wide street on one side or other of it; as far as the traffic is concerned there is no difference; either arrangement would make a slight deviation in the street line, westward if the St. Martin's-le-Grand road be taken, eastward if the other line be taken; very slight in either case, and about the same. Under these circumstances, deliberately to place the new building further from the old one, and send the main public traffic between them, when it might all go clear of the Post-Office buildings, shows a want of practical sense which is almost incredible.

But the real fact and the real lesson from all this is that architectural schemes so important as this, and involving either the making or the marring of a great public improvement, ought never to be left to be carried out by official bodies who regard them only from the point of view of practical (in this case indeed rather unpractical) surveyors. Here is a building on which £300,000 of public money is to be spent, both the design of which, and the arrangement of street lines in connection with it, may mean the realisation of a great architectural improvement, and we are to be told that the scheme has been fully gone into by the representatives of the Office of Works, the London County Council, and the City Corporation, and they have all agreed upon it, in a kind of secret conclave; and we are to accept their ideas on a subject on which they have manifestly consulted no one of high architectural acquirements. It is really a monstrous state of things. In a case of this kind either the design ought to be put, openly and above-board, into the hands of an able architect, who will have some ideas beyond surveying and traffic lines, or (which would perhaps be better) the whole scheme should be made the subject of an open competition, dealing not only with the design of the building, but with the whole treatment of the site. Unless that is done the whole thing will be hopelessly spoiled and the chance of a great architectural improvement entirely lost.

THE LONDON SOCIETY.

THE second number of the *Journal* of the London Society contains an interesting record of the work which the Society is doing. In an editorial note the opinion is expressed that recent developments favour the views of those who wish to see the University of London placed on the south side of the river. In urging that no steps should be taken in the direction of the acquisition of Somerset House until "expert advice has been taken as to whether the alterations will necessitate any interference with architectural features which are such an ornament to London" the *Journal* is laying stress on a most important point, as it is too often the case that buildings are acquired only to find that they are unfit for the intended uses.

The "Chronicle of Events" deals with main roads and town planning, Paris improvements, and the question of the preservation of North-street and Smith-square, as to which the Society has been approached by the Society for the Protection of Ancient Buildings. The London County Council's proposal to widen the approach to St. John's Church on one side only, will throw the church to one side of the centre line of the widened street. It is pertinently asked whether the traffic demands of the neighbourhood really necessitate street widening.

The "Notes on News" contain a summary of proceedings at the Society's dinners, which have proved a successful means of evoking interest in the work which has to be done in connection with London.

The Interim Report of the South Side Committee is given, the duties of which are defined as follows:—(*a*) The consideration of certain proposals already made for the development of and approach to London south of the Thames; (*b*) the collection of facts bearing upon such schemes or any other and better schemes; (*c*) the presentation of certain conclusions, either in the form of a comparison of the merits of rival propositions or by way of a recommendation of some line or lines of future action.

Space forbids our dealing in detail with the subject-matter discussed in the *Journal*, but we have said enough to indicate the wide scope of the London Society's activities, which now include the institution of competitions for suggestions as to the improvements of London. As we have before indicated, we believe it has outgrown the dangers of infancy and that it will exercise a beneficial influence on matters appertaining to the improvement and development of modern London.

NOTES.

Modern Athens. MR. THOMAS H. MAWSON has been commissioned, on the personal recommendation of the King and Queen of the Hellenes, to prepare a scheme for the extension and remodelling of Athens, which is growing at a rapid rate; and the scheme will make allowances for the extensions which are likely to take place during the next half-century. The proposals drawn up includes a great new railway-station to supersede the existing termini, new Law Courts and other official buildings, new hotels and boulevards (the latter including a broad avenue from the city to the Piræus), and a complete park and playground system. New waterworks are also contemplated, as well as a housing scheme, which will be required when the hovels at the base of the Acropolis are removed. Mr. Mawson, during a recent stay at Athens, went over the whole city with the King and Queen and the officials, and conferred with archæologists connected with the British and German Schools at Athens; and he has for some time been engaged upon the replanning and extension of the Royal gardens at Athens and the planning of the Royal burying-ground at Tatoi, which is a few miles outside the city. He has also prepared a similar plan for Corfu. It is pleasant to hear that an Englishman has been entrusted with so important a scheme in a foreign land and to know that it is in such capable hands. If Modern Athens is to be a worthy descendant of the Ancient Athens which we know, we feel that the best of the world's great architects of to-day will have to be employed in building up the new city which is to be brought into being.

American Art Commissions. THE conference of representatives of the Art Commissions of various states and cities of the United States of America, which met last year in New York to discuss the proper functions and powers of all future commissions, has now published a pamphlet containing suggestions as to their organisation and scope, founded on the experience of those already in existence. The conference discussed the size and composition of such commissions, whether members should be professional men or laymen or both, and by whom they should be nominated; whether commissions should be advisory only or have power to give effect to their recommendations, and the length to which their jurisdiction should extend. The result of deliberations on such points as these is embodied in three draft forms of suggested Acts for establishing such commissions, applying to a state, a first-class city, and a second-class city respectively. It is hoped that this pamphlet will tend to encourage the further extension of Art Commissions both in cities and states, and those interested in the movement can obtain copies on application to the Art Commission, City Hall, New York. There is no doubt that Art Commissions have produced good results in America. Conditions are somewhat different here, and we already have a few civic leagues or guilds that pursue the same object, but we might well consider the advisability and the possibility of the creation of commissions with such definite powers and responsibilities as those possessed by the Art Commission of New York.

The Traffic Problem. SIR HERBERT JEKYLL brought some astonishing facts and figures relating to the ever-increasing traffic of London to our notice in the paper he recently read before the R.I.B.A. It is well that the gravity of this problem should be always kept before us, and, as late Chief of the Traffic Branch of the Board of Trade, no one is better qualified to do this than Sir Herbert Jekyll. It is evident that no solution will be arrived at until the question can be studied and discussed from every point of view. The newly-formed Town Planning Institute, including, as it does, experts in every branch of town planning, should be in a position to take a comprehensive view of the subject. Reference was made at the Institute meeting to the advantage of endeavouring to lessen the amount of traffic by organisation. While much might be accomplished in this way, still more might be done by endeavouring to remove the cause of much of the traffic, so rendering it unnecessary. The proper location of the distributing centres of London, such as the markets to which we recently referred, would tend in this direction. So would the point referred to by Mr. John Burns that, under the new Act, local authorities have the power to determine where certain trades and industries should be carried on. If London had such power over the central area, and would only use it, we should soon see an improvement. We think this aspect of the question deserves consideration in view of the fact that a general widening of streets seems to be the only solution of the problem that the Traffic Branch of the Board of Trade can propose. It may come to this in the end, but before this enormous cost is incurred it might be worth while to see what can be done by a better organisation and arrangement of the elements and units in the town that produce the traffic.

An Unwritten Paper. MUCH as we find to interest us in all that Professor Lethaby says, and valuable as were the "Notes on Greek Architecture" which he contributed to the meeting of the Architectural Association, we cannot help regretting that he decided to avoid controversial subjects and to abandon his first—or was it his second?—idea of writing the paper he "really wanted to write" on the "teaching of architectural theory in France and the movement of thought which underlies and goes behind the common routine of the schools." It is just this theory and this movement of thought underlying routine which is exciting so much interest at the present moment among the younger generation, and which is engaging the attention of the First Atelier of Architecture. As Professor Lethaby is one who thinks for himself and sees things with his own eyes, his ideas and observations have exceptional interest and value. A subject is none the worse for being controversial. On the contrary, it may even be better, for at least it is likely to be vital and certain to be of definite and immediate interest. Students who realise the serious effect on their future such controversial subjects may have might naturally look for guidance from those who profess to lead. We regret Professor Lethaby's decision the more inasmuch as the few remarks on this subject with which he prefaced his paper suggest that we have lost what might have been an illuminating exposition of the influence of Viollet-le-Duc on the teaching of the Ecole. Unfortunately, the name of Viollet-le-Duc is associated with methods of restoration which do not commend themselves to our judgment. Prejudice has thereby been excited, and his writings do not receive the attention they deserve. The loss is ours. Viollet-le-Duc was one of the great minds of his age, an original thinker, a philosopher and critic, with whose ideas every student should be acquainted. A paper from Professor Lethaby would have done much to draw attention to their value and their bearing on the controversies of the moment. Perhaps Professor Lethaby can be persuaded to utilise the date still vacant on the Architectural Association list by reading the paper he "really wanted to write"?

The Royal Gold Medallist. No more honoured name could have been put forward by the Council of the Royal Institute of British Architects as the next recipient of the Royal Gold Medal than that of Jean Louis Pascal, Member of the Institute of France. It is a name which stands for all that is best and most enduring in the art of architecture. M. Pascal has earned a double distinction as an architect and teacher.

A GENERAL meeting of the Architectural Association was held at No. 18, Tufton-street, Westminster, on Monday, the President (Mr. W. Curtis Green) in the chair.

Announcements.

Mr. G. L. Elkington (Hon. Secretary) announced that the fourth spring visit would take place on February 28, to the Mappin Galleries, Zoological Gardens (architects, Messrs. Belcher & Joass), members to meet at the entrance of the new offices, Zoological Gardens, at 2.30 p.m.; that an exhibition of educational cinematograph films would be given on Friday, March 6, at 8 p.m., at No. 18, Tufton-street; the films are specially prepared by Messrs. Ruffell's Exclusives, Ltd., under the direction of the Architectural Association, for use in architectural and technical schools. Further, that the next meeting of the Camera, Sketch, and Debate Club would be held on Thursday, February 26, at 8 p.m., when a paper would be read by Mr D. B. Niven, entitled "The South Improvement and other Town-Planning Schemes in London."

Alterations in Procedure.

The Hon. Secretary further announced that in pursuance of the powers vested in them under the by-laws the Council had altered the date fixed in the Syllabus for the procedure in connection with the election of the Council for next session. The election of officers for 1914-15 would take place on March 30 instead of March 16, and the nominations would take place on March 16 instead of March 2.

New Members.

The President announced the following elections:—Mr. F. J. N. Bastable, Golder's Green, N.W.; Mr. B. G. Bowles, Sevenoaks, Kent; Mr. R. B. Craize, Wimbledon, S.W.; Mr. T. George, Clapham, S.W.; Mr. F. E. Gooder, Torrington-square, W.C.; Mr. A. G. Johnston, Leytonstone, N.E.; Mr. A. L. Jones, West Hampstead, N.W.; Mr. J. J. Nathanielsz, Brixton, S.W.; Mr. G. Shenstone, Leytonstone, N.E.; Mr. T. G. Smith, Highbury, N.; Mr. K. Takekoshi, Putney Park, S.W.

Vote of Thanks.

The President proposed a vote of thanks to the Right Hon. the Marquess of Lansdowne for kindly granting permission for a party of members to visit Lansdowne House on Saturday last, the 14th inst., and this was carried.

THOMAS ROWLANDSON.

Professor Selwyn Image, in the course of a lecture on Thomas Rowlandson, said he could well fancy the question arising to the minds of some of them: "Who is this Thomas Rowlandson?" Well, there was no cause to feel uneasy over some ignorance on the matter as if it reflected on their artistic culture and intelligence, but he wished, if he could, to interest them in Rowlandson. "In literature," said Arnold in his Joubert essay, "besides the eminent men of genius who have had their deserts in the way of fame, besides the eminent men of ability who have often had far more than their deserts in the way of fame, there are a certain number of personages who have been real [men of genius—by which I mean they have had a genuine gift for what is true and excellent, and are therefore capable of emitting a life-giving stimulus—but who for some reason or other, in most cases for very valid reasons, have remained obscure, nay, beyond a narrow circle in their own country, unknown. It is salutary from time to time to come across a genius of this kind and to extract his honey. Often he has more of it for us, as I have already said, than greater men; for, though it is by no means true that from what is new to us there is most to be learnt, it is indisputably true that from what is new to us we in general learn most." Well, what was true in reference to literature was true also in reference to the arts they were there concerned with. There was real profit as well as much delight in store for them in studying from time to time the lesser men as well as the greater. He called their attention to Thomas Rowlandson not simply because his work was dear to him, but because in his particular way he seemed to him a quite characteristic English artist, and an artist of singular genius, and he should try to give his grounds for saying this. Thomas Rowlandson was born in London in the Old Jewry in July, 1755. He died, aged sixty-nine, on April 22, 1827, in the Adelphi, and was buried where. precisely no one had been able to discover Born just eight years before his friend, George Morland, with whose art he had much in common, he was sent early to school at a certain Dr. Barrow's Academy in Soho. The boy soon showed signs of his artistic bent, and in due course entered as a student at the Royal Academy. In spite of a love of mischief, he worked hard and advanced rapidly, and the great Sir Joshua himself commended highly his skill in draughtsmanship. But while still in his teens the boy was invited by a rich uncle to his home in Paris, and remained there some two years, studying hard in the French schools. Back from Paris, he returned to the Academy, and then went back again to Paris. Whether they liked Rowlandson's art or not, there was no doubt whatever that he was a thoroughly trained artist. Within the limits he set himself he was an accredited master. He knew just what he wanted to do, and he did it. It had been said that, coming as he did at so early an age under the fascination of Parisian life, his pleasure-loving nature was only too easily seduced by the witchery of that gay capital from all devotion to serious art into following what was merely easy and frivolous. Now, whatever truth there might be in the accusation, he would merely say that Rowlandson was often frivolous, and something worse than frivolous, but he wished to show that in his art there was a great deal else besides frivolity and exaggerated caricature. He confessed that the world would have been a gainer if instead of spending so much of his delicate, sympathetic genius on current popular caricatures he had been more persistently faithful to its finer promptings. But essentially and by predestination he was a genius for what in life was vivacious and charming, and not of what was pathetic and profound, and if France did something to emphasise for him this characteristic of his genius, to suggest to and develop in him the best medium for giving expression to it, to put into his hand not the canvas and the brush, but the sheet of paper and the pen with the little saucers of water-colours wherewith to tint in his outlines, he thought they had no great cause of complaint against her. The effect of Parisian influence on Rowlandson was not immediately evident, for in 1775 he exhibited his first picture at the Academy. He knew nothing about it, but the title was "Delilah Visits Samson in Prison." That seemed to suggest an oil painting in the most serious if not necessarily the grand manner. Anyhow, two years later the young man set up at a studio in Wardour-street as a portrait-painter. Sitters did not flock to him, which was no wonder, as at that time he would have had Sir Joshua Reynolds and Gainsborough for rivals. Rowlandson certainly was not an ambitious, indomitable spirit, set on bending an adverse fortune to his will. He was afraid that the line of least resistance was the line he would always go along, and so within a year or two he deserted these higher flights of art. So far as he knew, no oil painting of Rowlandson existed, and as in the popular mind and the mind of those oracles of art, the dealer and auctioneer, it was oil painting that was the dignified medium which made an artist and his work of first-rate importance. Rowlandson in deserting it put himself out of serious artistic consideration. His fatally facile hand and imagination answered readily enough to the innumerable calls made upon him for the sketches of a country town, the reminiscences of some seaside or tavern episode, the burlesque caricature of some current political interest. Easily almost as one wrote a postcard he reeled these things off, and they filled his pockets with cash he so utterly could not do without, but in all these things the genius, though so often prostituted, was never quite ruined. And then, the call of impecuniosity for the moment withdrawn, Rowlandson gave his genius free play, and he gave what the finer spirit, for the moment untrammelled, so evidently rejoiced in. He passed from Rowlandson's life and character to note one or two of the special excellencies, or they might say virtues, of his art. The first was his mastery of design. He was an amazing master of it, and was never neglectful of it in even the most careless, the most blatantly comic and coarse of his drawings. This element of design was paramount in all the finest art; it was indeed a primary element of its fineness.

To illustrate his point the lecturer showed Rowlandson's drawing of Powell, the pedestrian, walking for a wager, and of a second drawing, entitled "Smoking a French Buck," and drew attention to the harmonious arrangement of lines and masses. He had referred to the admirable draughtsmanship of Rowlandson, but a man might be that and yet lack the final gift which made him a great draughtsman—the gift of bestowing on his drawing vitality. Whether correct or careless, the drawing of Rowlandson was always alive. Vitality of draughtsmanship was one of his main, constant characteristics; whether he was giving them a single figure or a little group of figures, or a large bustling crowd, the animation of these never failed. Whatever else they might be or not be, they certainly were alive—alert with life. Rowlandson was very fond of representing large groups and crowds, and these were amazingly hard things to represent; that was to say, if instead of being content with merely a suggestion, an impressionist smudge, they meant to give a sense of jostling and confusion, while at the same time they kept individual figures, well delineated and expressive of the whole mass in the true balance of the design. To accomplish this was a great and rare mastery, and was, he ventured to say, a mastery which no artist had ever shown more completely than Rowlandson.

The lecturer exhibited "The Road to the Derby," which was purchased by Mr. Pierpont Morgan, and was now in the Metropolitan Museum at New York, "The Miseries of London Life," and other sketches, as examples of Rowlandson's vivacity. He was sorry he could not show them examples of Rowlandson's treatment of pure landscape, such, for instance, as his drawing of St. Albans, in the British Museum, but he could show them his "Fish Market at Amsterdam" and "Place de Mier at Antwerp," which he considered were not to be surpassed by, say, Canaletto. Rowlandson was no dull delineator of mere topographical details, but he got also at the heart and spirit of the scene he was intent on. Professor Image next showed a drawing of "The Bells of Ouseley," which, he said, readily reminded him of the great Dutchman, Adrian van Ostade's drawings, and need fear no comparison with them. One of the most charming of Rowlandson's drawings was "The Hay-Makers," of which he could fortunately show the original. It was purely in pen outline, but was doubtless intended to be coloured. Rowlandson's method was first to faintly sketch in the subject, generally in pencil, then to put in the outlines with a reed or quill pen charged with a mixture of Indian ink and vermilion; next to wash in the shaded parts with a similar mixture, and finally over this to carry the local tints. The one drawing he would show of what might be called an important Rowlandson was "The Review," and a fine drawing it undoubtedly was, but in what were ordinarily called "important" Rowlandsons the fresh spirit and sensitive touch had gone out of them. They grew mechanical, and artistically were not a patch on the slighter, smaller, more spontaneous designs. In his best drawings his colour was entirely on the side of delicacy, transparency, pearliness, and opalescence. The last point he wished to emphasise was Rowlandson's dainty sense of youthful grace and beauty, especially female beauty at its first ripeness. In

Manchester Royal Exchange Competition: Third Premiated Design, by Messrs. J. T. Halliday & Claude Paterson.

conclusion, Professor Image said that Rowlandson's work had been as unknown through three generations as the grave in which he lay. If the name had recalled anything it was only the memory of a coarse caricaturist. Even his biographer and devoted admirer, Joseph Grego, did not dare to entitle it other than "Rowlandson, the Caricaturist." Within quite the last few years, however, there had sprung up a revived interest in him. To-day, judging from catalogues one received from exhibitions and sale-rooms and the prices realised in them, there appeared to be flourishing for the moment a sort of Rowlandson cult. He sincerely hoped that all this meant a discriminating appreciation of his genius and of his real artistic worth.

The President

remarked that they had had a great treat, and it taught them a useful lesson in showing the power of analysis Professor Image had brought to bear on the work of Rowlandson, and also in showing them the part which form and design took in the criticism. He was afraid that as architects they were extraordinarily ignorant on some of the allied subjects of their art.

Sir Charles Holroyd,

in proposing a vote of thanks to the lecturer, said he had a special liking for Rowlandson's drawings, and had hoped to show some, but it was almost impossible, as the prices were so extraordinary. He could not buy them for the National Gallery as they were not painted in oils. They had, however, a beautiful collection in the Print-room. He thought there was something to be said for Rowlandson as a rollicking caricaturist, for it was part of the art of a nation that such men should exist. They were most wholesome in a way, for they taught them not to hang on to the skirts of the beautiful more than was necessary. They also taught them to have bold and great designs. For instance, they might make a splendid bold design of a football match, but it would not be of a refined and delicate type. Rowlandson, however, did both. Rowlandson was a master of design. He agreed with what Professor Image said as to the study of the lesser masters, if they would allow him to put the accent on "masters." In a way they spoke to them more than the great men of the times, for the lesser men spoke of something which was more akin to them. He always liked to think of Rowlandson as a buxom artist. It was an adjective which perhaps expressed the round curves he used so obviously over all parts of the human body. The fashion of putting figures round the designs of houses was no longer followed, but if they could put figures in as beautiful as those of Rowlandson it would add great charm to the architect's drawings.

Mr. A. Keen,

in seconding the motion, expressed his delight at the lecture and regretted that architects were prone to talk too much of architecture. It was a great advantage once in a while to get away from a particular subject and turn attention to something else. At the same time Professor Image would not be disappointed if he found that few speakers knew much about Rowlandson, and he confessed that until that evening he had had but a faint idea of what that artist had done. He had in his possession a drawing which he had always imagined to be a Rowlandson. It was a drawing of an old gentleman fishing in a stream, and underneath were the words:—

> By the side of a murmuring stream
> An elderly gentleman sat,
> And over his head was a wig,
> And over his wig was a hat.

The lecturer had insisted very strongly on the quality of design, which he supposed was one of the greatest characteristics a pictorial artist could possess. A friend of his, whose judgment he paid great attention to, speaking of architecture, said that the leading difference between the old work and the new was just this one question of the capacity to design—the actual power of design that was in the work of the old masters amongst the architects was the great thing which distinguished them from the men who followed of the present day. Certainly in the drawings shown them they had seen the power of design in pictures. At the same time, it was a thousand pities that Rowlandson did not do more serious work, for the portrait of George Morland which they had seen showed that the capacity he possessed for serious work of that kind was enormous.

Mr. J. A. Slater

humorously described the rebuffs he had experienced in his pursuit of knowledge as to the work of Rowlandson. The result in the end was that he was told the only person who knew anything about the serious work of the artist was Professor Image.

Mr. A. G. Horsnell

remarked that three years ago he came across a Cornish drawing of Rowlandson being used to advertise the Great Western Railway, and this led him to look up his work more fully. He agreed with what Professor Image had said. He thought, however, that Rowlandson had been discovered by a good many modern artists, and he felt that the French etcher, Le Pére, must have seen his drawings.

The motion was carried.

Professor Selwyn Image,

in reply, said he loved Rowlandson's rollicking drawings, but there were some of his drawings which passed the line of being rollicking. He was some time ago offered a collection of the artist's drawings which were too coarse even to be shown, and yet where the female figure was introduced it was treated with the utmost tenderness. It seemed as if the artist was saying, "This is a damnable thing I am doing, but I cannot besmirch this young girl!" It emphasised his point that youth had an amazing fascination for Rowlandson. He would like some of them to try and discover where the artist was buried.

The President announced that the next ordinary general meeting would be held on March 2 at 8 p.m., when a paper would be read by Mr. W. S. Purchon, A.R.I.B.A., entitled "Architecture and Environment."

R.I.B.A. Prize-Winners.

In connection with the list of R.I.B.A. prize-winners referred to in Mr. Blomfield's speech, reported in our issue of last week, it should be noted that Mr. Cyril Farey, before entering the Royal Academy Schools, received four years' training in the Architectural Association Schools

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THIRD SPRING VISIT.

On Saturday, February 14, a large party of members of the Association visited Lansdowne House, Berkeley-square, where, by the kindness of the Marquess of Lansdowne, the suite of fine rooms on the ground floor was inspected.

As is well known, this house (originally Shelburne House) is a complete work of Robert and James Adam, and one which was viewed by them with complacent self-satisfaction, as evidenced by their references in the great book of their designs which they published. In this they state that "the scite of this House being more ample than usual in London, it has admitted of a noble suite of Apartments on this floor and on the above. The Eating-room, in particular, is of great dimensions, and the Gallery is magnificent." These words are guilty of a slight misdescription. As previous writers have observed, the communication doors throughout are not sufficiently generous in scale to produce the fine vistas which the plan renders possible; the result is therefore rather a suite of fine rooms than a fine suite of rooms.

The ground plan as appearing in the book has undergone several important modifications, and apparently a few later alterations have been made, chiefly in relation to the approach to the gallery. The entrance, or "porter's hall," is rather frigid, but gains some interest from the columned screen at the end next the inner staircase hall, which is not seen. Describing the rooms in the order in which they were viewed, the next is the ante-chamber to the eating-room. (Why does this strictly accurate appellation conjure up such a horrid vision?) This is very pleasing in the treatment of its walls and ceiling with charming small-scale decorative painted panels and lunettes. The eating-room, despite its fine scale and dimensions, is a trifle disappointing. Adam's hole-in-the-wall windows externally and scooped-out niches internally have a bare appearance, which accomplishes more to establish the impression of lack of robustness often urged against his work than the "cold, dead

Classicalism" which has been advanced as the cause. Like the hall, this room gains its chief effect from the columned screen—in this case "composed Doric," as the architects named it, though decomposed Corinthian would appear to be more descriptive. The first drawing-room is unquestionably a splendid room, and the richness to which Adam decoration in a scheme of full colour can attain is well exemplified. The second drawing-room, now a breakfast-room, is remarkable chiefly for a very beautiful decorative effect in tones of pale grey green and sepia—very quiet and restful. The third drawing-room (now the library), owing to the erection of an extension at the side of the gallery, has only a single window to light its 24 ft. by 37 ft. of floor area, and it is worthy of remark that yet the bulk of the room does not appear badly lighted. The gallery or ballroom is considerably varied from the published plan. It is a curious apartment, and even still retains to some extent—what it certainly would have had if carried out according to plan—the appearance of being three apartments united. The centre part has a lofty segmental coffered barrel ceiling, and the two ends loftier three-quarter domes invisibly lighted (from most ordinary aspects) by lunettes in the missing segments adjoining and above the roof of the central portion. The niches here and elsewhere throughout the house contain antique statues—a priceless collection. The pictures, china, furniture, and other *objets d'art* are also of remarkable interest, but little opportunity existed for their serious study.

ROYAL EXCHANGE, MANCHESTER.

We now illustrate the third premiated design submitted in the Royal Exchange Competition by Messrs. Halliday & Paterson. As we have before pointed out, this is a scheme possessing many merits, the elevational treatment especially being refined and pleasing. The retention of the "Hovel" mars the planning of the ground floor.

THE CARPENTERS' HALL LECTURES:

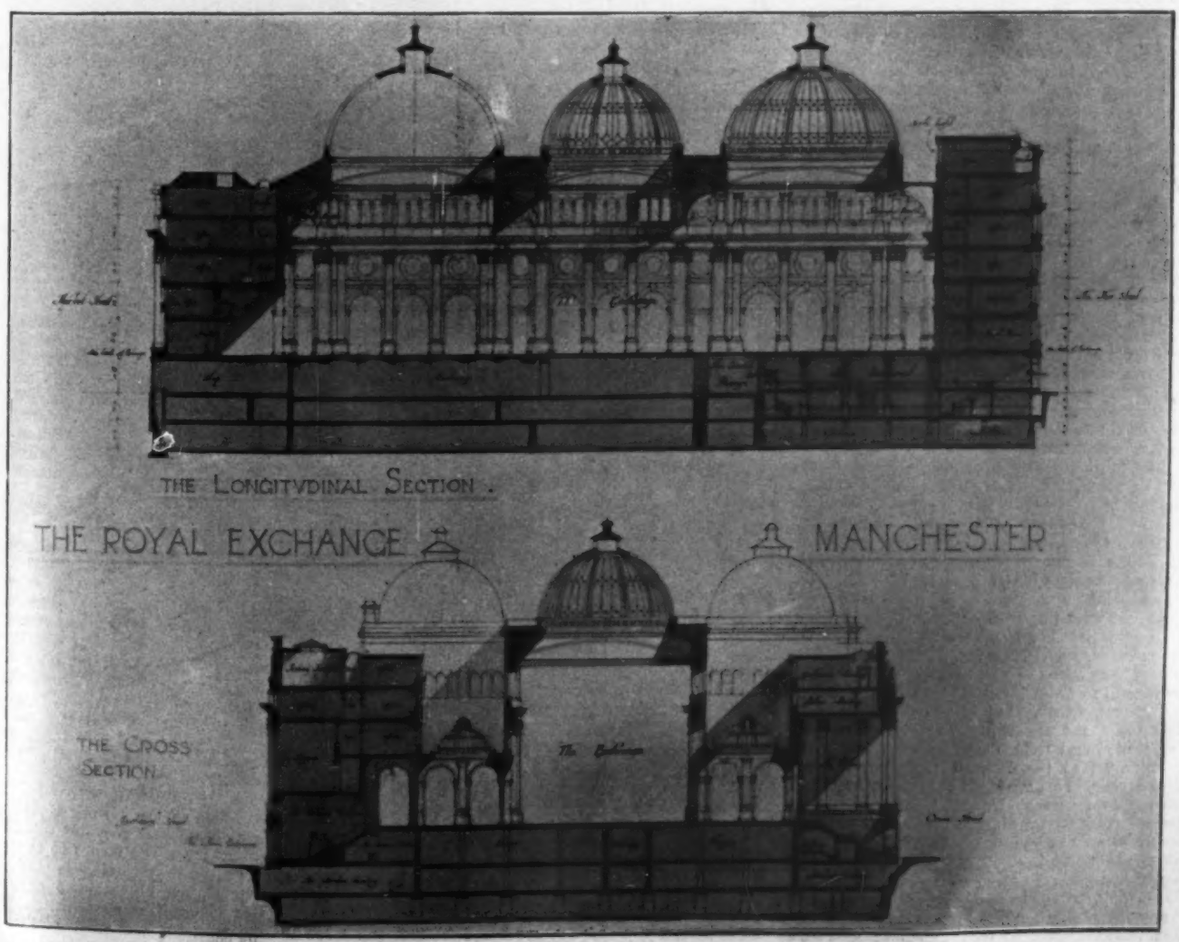
THE LOGICAL TREATMENT OF MODERN CONSTRUCTION.*

At the outset it will be desirable for me to make it clear that, although the need for reasonable brevity in a title may perhaps have made it seem that I am going to dogmatise on the subject of the treatment of modern construction, this is far beyond my intentions. The task of attempting to lay down the law as to how our modern construction should logically be treated is one which our most gifted architects might well consider to be beyond their powers. But, at the same time, a recognition of the difficulty of finding a true solution of our problems in regard to the treatment of modern construction, and of the even greater difficulty of finding any common ground of agreement as to this question, should not result, as I am rather afraid it does, in a general shirking of the subject. Does it not seem reasonable on the face of it that, in an age of which the chief characteristics are scientific analysis and research, we of the building profession should definitely put our minds to the task of making our buildings a logical outcome of the conditions under which they are erected, and of the materials which science has put at our disposal and economic conditions frequently compel us to adopt. Let us examine the possibilities before us in the direction.

While many of us are in full sympathy with the growing tendency to pay more attention to the problems of practical building and less to the minute study of the various historic styles of architecture, it is possible, however, to go too far in this direction. The history of architectural development, in addition to being an absorbingly interesting study, has, when considered on broad lines, a distinctly utilitarian value. History may or may not repeat itself—the historians may be safely left to fight out this question among themselves—but it is certain that the study of history enables us better to understand the occurrences of the present, and occasionally to venture a step or two into the future. This applies to an even greater extent in that special branch of history which deals with architecture. For, consciously or unconsciously, we in our work cannot be otherwise than linked with the past, and if we use some of the forms of the historic styles in our ordinary work it seems only reasonable that in a search for the correct treatment of new methods of construction we should endeavour to find by analogy any lessons that may lie waiting for us in the history of architecture. Let us therefore consider on the broadest possible lines the principal main styles of architecture, and see how the methods of construction adopted had vital influence on the architectural forms. By this means it may be possible, when considering the forms to be adopted in our treatment of modern construction, to elucidate some broad principle for our guidance.

Greek architecture has been described as an architecture of large stones, and this is certainly so in the case of the buildings that remain for our study to-day. The way in which the form of construction necessitated by the use of large blocks of stone has determined the style is very striking. The largeness of the stones has naturally resulted in a post-and-lintel style, the essential characteristic of which is a maximum degree of permanence and durability. Whether or not the Greeks were acquainted with the principle of the arch is possibly a debatable point. It seems clear at any rate that, with the large stones adopted, there was no need for the employment of arch construction. It is evident that the spacing of the columns was principally determined by the size of the stones readily available. Also the proportion of the columns in all probability was affected to a considerable extent by the degree of experience and skill possessed by the workmen. The columns of the early Doric temples, as, for example, those at Pæstum, were rude and massive, and it was not until

* The sixth Carpenters' Hall Lecture on "Arts Connected with Building," delivered on the 11th inst. by Mr. H. W. Cubitt, A.R.I.B.A., at Carpenters' Hall, London-wall.



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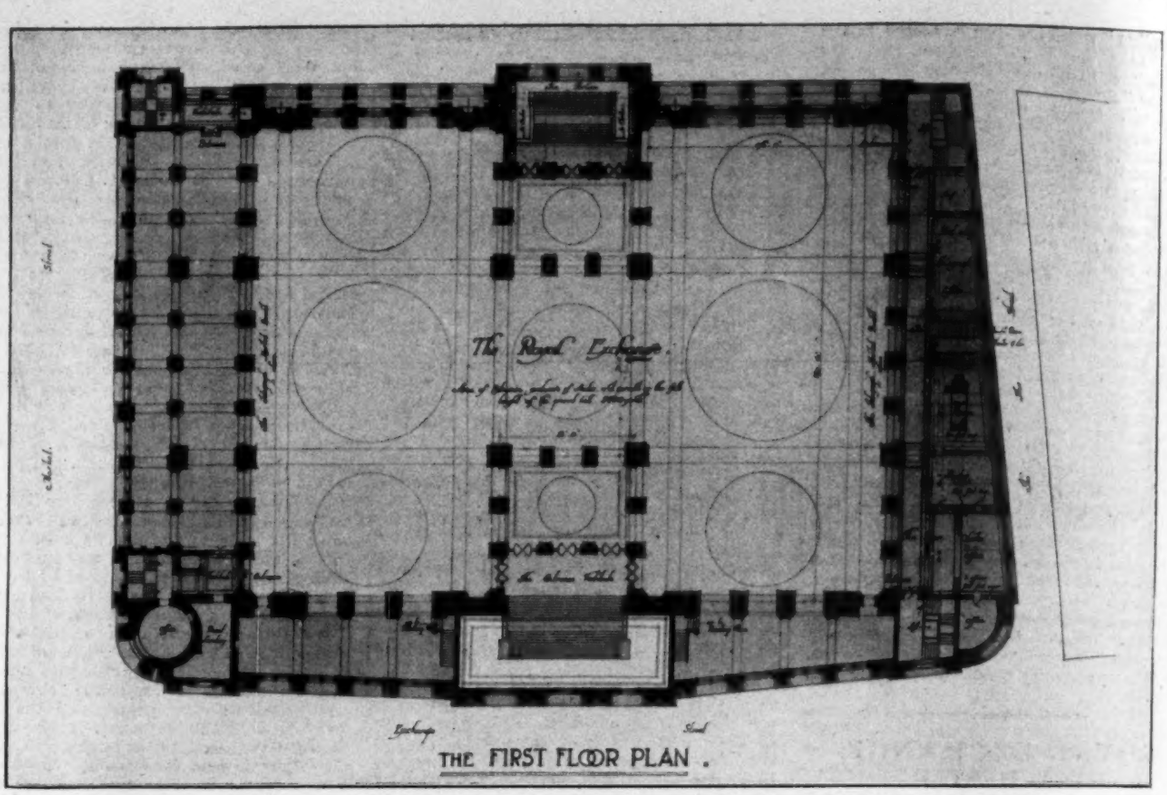


Manchester Royal Exchange Competition: Third Premiated Design, by Messrs. J. T. Halliday & Claude Paterson.

a higher degree of workmanship was reached that the more slender proportions of the Ionic and Corinthian Orders were attempted. On these two things, the spacing and proportions of the columns, the whole of the variations in Greek temple design may be said to depend, and thus it seems clear that Greek architecture was the direct result of a logical recognition of structural factors. It must be admitted, of course, that numerous variations and refinements were adopted, but these were secondary matters, and were not allowed to affect in the slightest the main structural lines of typical design.

Proceeding with our short review we come to Roman architecture. It should be realised that there are two distinct types of Roman work. There is, in the first place, the architecture of the temples, which is an obvious following of the Greek tradition, the designers being often of Greek nationality. Here the arch, if adopted at all, is subordinated in the design to the horizontal lines naturally evolved in the lintel treatment of the Greeks. In the second place, there are what may be termed the natural works of the Romans themselves, the stupendous achievements in the forms of bridge, aqueduct, and amphitheatre, which have left the impress of Rome on the whole of the then civilised world. Here the arch is predominant, and without this new form of construction these great works would have been impossible. The two types are, of course, often merged together, the principal example of this being the public baths, where arch and vault form the main basis of the design, while column and entablature are used as decorative features. The finest works of the Romans are admittedly those in which the arch is employed with all the unsurpassed daring for which the Roman constructors were famous, while the more ornate architecture of the temples is at the best only second-rate Greek. Doubtless, however, this was not the current judgment of the time. The skilled and refined designer of the temple now known as the Maison Carrée at Nîmes would probably have thought it an insult if anyone had suggested that his building was surpassed by an aqueduct erected in the neighbourhood by some military administrator; but if the world to-day had chosen between the loss of the Maison Carrée and that of the Pont du Gard there would not be much doubt as to the result of the decision. This goes to prove that posterity will be more ready to give the palm to a piece of honest logical construction, even of the kind which we to-day stigmatise as engineering, rather than to any form of scholastic architecture which has not the same attributes of vigour and sincerity.

With the fall of the Roman Empire architecture in Western Europe was for centuries at a low ebb. Then in the eleventh century the craft of building was revitalised, and with this movement there occurred a new and very important structural development. In typical Roman vaulting the weight of the vault was distributed over a continuous length of walling. But in Romanesque work we find that the weight of a vault is concentrated at four points of support, and in the place of a continuous wall we get, as the logical structural result of this concentration of loads, a series of piers with comparatively thin "panel walls" between them. This form of construction is the essential characteristic both of Romanesque and Gothic architecture.

Throughout the Romanesque period the construction adopted was of very solid and substantial character. The predominant feature of our Norman work is its rugged solidity and strength. Then, towards the end of the twelfth century, a most striking change manifests itself. In the place of the roughly-worked masonry of the Norman builders we get delicately-moulded freestone, and, instead of massive proportions, a slenderness in construction even beyond that attempted in the most refined classic architecture. The cause of this is a subject of interesting speculation. Probably the desire for construction so daring in its economy of material as sometimes to jeopardise stability arose from association with the East, where much greater delicacy was current in both design and workmanship than in the West. But it would have been impossible for the workmen of A.D. 1100 to have attempted in any way the feats in masonry which were successfully executed by their successors of A.D. 1200. One of the reasons for the great thickness of the Norman walling was the very indifferent workmanship employed, and we may reasonably assume that, as the skill of the workmen increased, advantage was taken of the opportunity to economise in material, and that in this way the evolution of what is commonly known in this country as Early English work was a real structural development. The course of architecture throughout the other stages of Gothic shows a similar logical progression, which may be said principally to have centred round the design of the window openings. The desire for an increased display of stained glass led to larger window openings, and, as this involved a lessening of the walling, deeper buttresses were required to safeguard the construction against the thrust of the vaulting. Throughout all Gothic work the structural features are emphasised and form the basis of the design.

This brief review of the main historic styles—the Renaissance being regarded merely as an architectural instance of reversion to type—is of interest to us as showing that all important developments in architecture have been based on structural requirements. Yet there are persons of high standing to-day who go even so far as to suggest that we should refuse to use the new materials and forms of construction that modern science has put at our disposal. It is inconceivable how they can fail to realise that if such a policy had been pursued in the past there would have been no such thing as architecture. This attitude of mind is, however, as old as humanity. Doubtless when the first mud hut was erected there were conservative cave-dwellers who prophesied disastrous effects on current art from this departure from precedent. The pessimists are always with us, and we must endure them as best we can. It is, of course, inconceivable that the wheels of progress should be put back, and forms of steel and reinforced concrete construction already evolved should be relegated to oblivion. Given that modern forms of construction are to be employed in the erection of our buildings, there are two methods of treatment. One is to disregard altogether the fact that the construction is different from that current a century or so ago, and to erect a building of which the main structure is of steel or reinforced concrete in exactly the same manner as a brick or stone building. This, unfortunately, is what is largely done in the present day. The second method is that of giving full recognition to the form of construction adopted, and of using this form as the governing factor in the determination of the main lines of the design. In this way, and in this way only, can there be an honest logical architectural expression of modern construction.

Doubtless there are few careful students of the evolution of the historic styles who will not agree with this as a statement of general principle. But when it comes to the practical application of such a principle in modern architecture we are on troublesome ground. Let us consider the outline construction of a steel-frame building as designed solely from a utilitarian standpoint. The steel skeleton is by no means pleasing in appearance, but neither

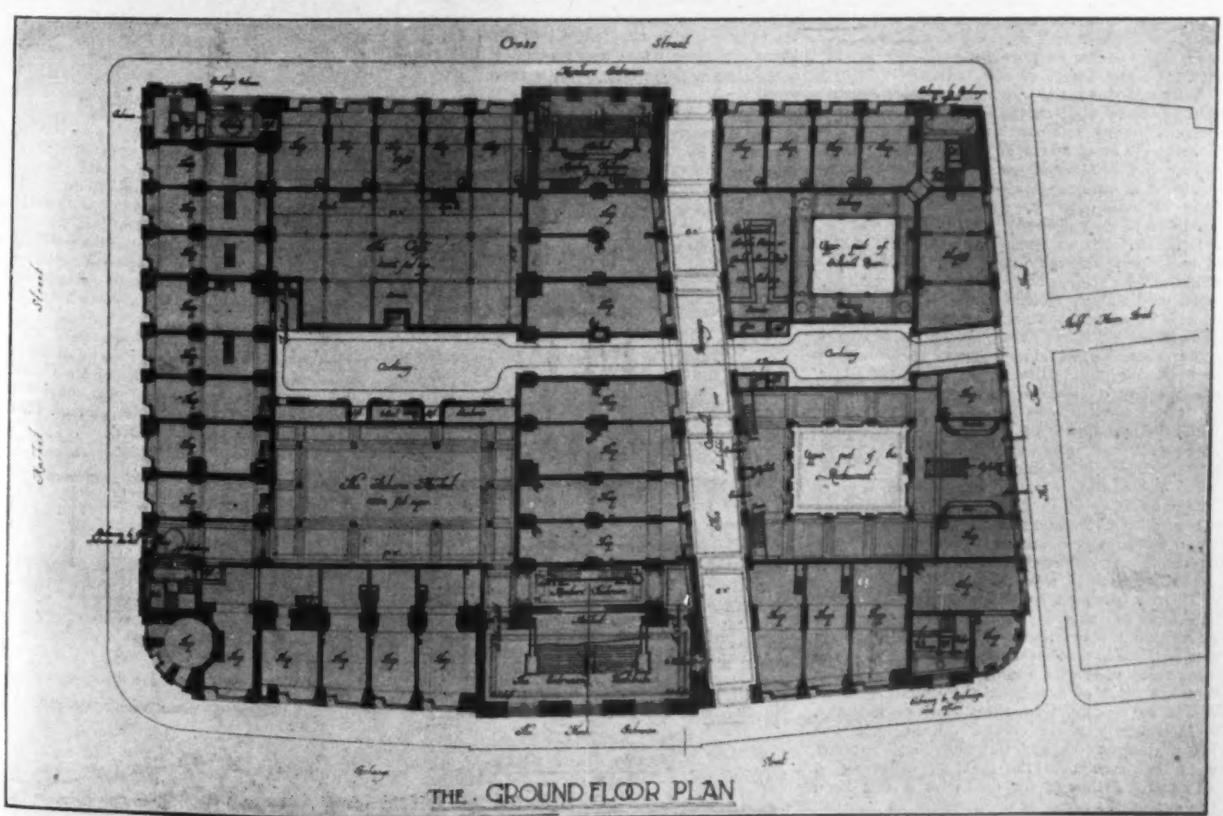
is the skeleton of the human body, however beautiful when clothed with flesh. The construction will be seen to consist of a series of steel sections placed vertically and known as stanchions, and another series placed horizontally and known as beams. The respective spacings of both verticals and horizontals is generally uniform; in the former case merely for reasons of convenience of construction, and consequently capable of being varied for purposes of architectural effect; in the latter case because the beams necessarily coincide with the floor levels. A comparison of the structure of such a building with that of one erected during, let us say, the Georgian period will show very important changes. The arch as a structural feature is non-existent in a typical steel-frame building, and the construction throughout is as truly one of the post-and-lintel form as was that which applied in the architecture of Greece. Although the semi-circular form of arch can be constructed in steel, this form is not appropriate to the material. The typical steel arch is one of segmental form with a small "rise," and the use of this is practically restricted to bridge work, where large spans are encountered and rigid abutments to take the thrust of the arch are obtainable. It will generally be found that where in our modern buildings the cart is put before the horse, and a steel arch is required to be formed to suit the design, the curve is obtained by light steel members attached to a rectangular steel framing of heavy stanchions and beams, the "arch" being one in name only.

The conditions are practically the same in the case of reinforced concrete work, although the arch has been occasionally adopted in the case of floor construction for large spans. It will be seen that our modern construction has similarities both to that of Greece and of the Gothic period. The post-and-lintel construction necessitates the architectural framing of the building by rectangular lines. The arcuated treatment to which we have been accustomed for many centuries is no longer justifiable except in the unusual case of spans so large that they cannot be dealt with by means of ordinary beam construction. What I have described in Romanesque and Gothic as the pier-and-panel treatment is also the necessary outcome of modern construction. It is obviously absurd to treat the whole of the wall surface of the building as of equal value for weight-bearing purposes when only the portion of such surface—namely, the portion in which the stanchions occur—is doing the whole of the necessary work of supporting the structure.

It has been said that modern frame construction consists of a series of vertical and horizontal members. The question of whether vertical or horizontal treatment is required will depend upon the circumstances of the case. As the new forms of construction are more likely to be generally adopted in the towns where land is very valuable and buildings are necessarily lofty the more usual treatment will be that in which the vertical lines of the stanchions are emphasised. But in the case of erection of a large building restricted in height to one or two stories a horizontal treatment obtained by emphasising the lines of the beams would appear to be required. In such a case there will be a further resemblance to Greek architecture where the dominating lines are those of the entablature.

The question of the proportion to be adopted is naturally one of great importance. Where the supports of the building are of steel it is both logically wrong, and from the economic standpoint extravagant of material and wasteful of space, to surround the steel supports with a mass of brickwork or stonework so as to make it appear that those latter materials are carrying the construction. Only a sufficient amount of casing material should be used to give the steelwork the necessary protection against the effects of fire. But it will be said that in lofty buildings such supports will appear hopelessly inadequate to carry the weight of the structure above them. Admittedly this will be so if the upper portion of the building is designed as one large wall surface, broken only by a few windows. But if, as is customary, the steel construction extends throughout the whole height of the building, then if this construction is logically treated by means of emphasising the stanchion lines, and the rest of the work formed as light panel filling, there will be no such appearance of excessive weight on the piers at the ground-floor levels. It may further be said that if the proportions of the members are kept to the minimum size required by structural conditions an appearance of undue lightness and possibly even of instability will result. But to some extent the ideals held in regard to architectural proportion are matters of education and possibly of racial preference. The standard by which we judge proportion is doubtless the human form, and here we meet with distinct differences of opinion. The ideal human figure, judged from the European standpoint, would not be accepted as such in, for example, Turkey or Japan. We can also bring to our aid from architectural history a somewhat paralleled case to our own. It may be assumed that a Norman mason, having worked as a youth on the nave piers at Fountains Abbey, would, when visiting in old age the thirteenth-century work at Lincoln, have unfavourably criticised the comparative slenderness of the proportions there adopted. Possibly we also are prejudiced against proportions less sturdy than those to which we have been accustomed.

Already as a set-off against the many examples of how not to do it there are a few buildings illustrating with more or less success the logical treatment of our new methods of construction. The Selfridge building, Oxford-street, so well known that a slide of it seems unnecessary, is to some extent an example of steel-frame construction treated in a straightforward manner. In this as in other examples of city buildings the lines of the stanchions are justly treated as the main feature of the design, the spaces between the stanchions being occupied by windows framed in cast-iron panels. It would seem, however, a fair criticism of this building to point out that, although the structure is steel, and consequently of comparatively slender proportions, the designer by the encasing of his stanchions to an excessive degree has obtained an appearance of massiveness and solidity which is a common characteristic of stone construction, but quite out of place in a structure of which the main lines are of steel—a material many times stronger than stone. Also it is questionable—perhaps more than questionable—whether the use of the Classic column is a reasonable treatment of a steel-frame building. A more successful building is doubtless that of Messrs. Burberry's in the Haymarket. Here again we have the lines of the stanchions treated as the main feature of the design, with the spaces between the stanchions formed as panels. Columns are again used, but, being less in scale than those in the Selfridge building, the general design does not appear so heavy, and is more in keeping with the steel-frame



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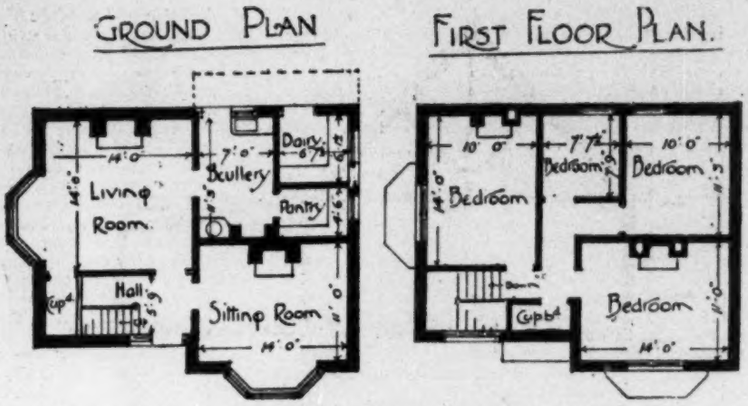


Proposed Cottage on Small Holding at West Row, Mildenhall.

Mr. A. Ainsworth Hunt, Architect.

(Erected in 1911 at a cost of £250.)

construction of the building. It will be seen that in the upper part of the building an arched treatment is adopted, but, as has been already stated, the arch over a small span does not commend itself in steel construction.

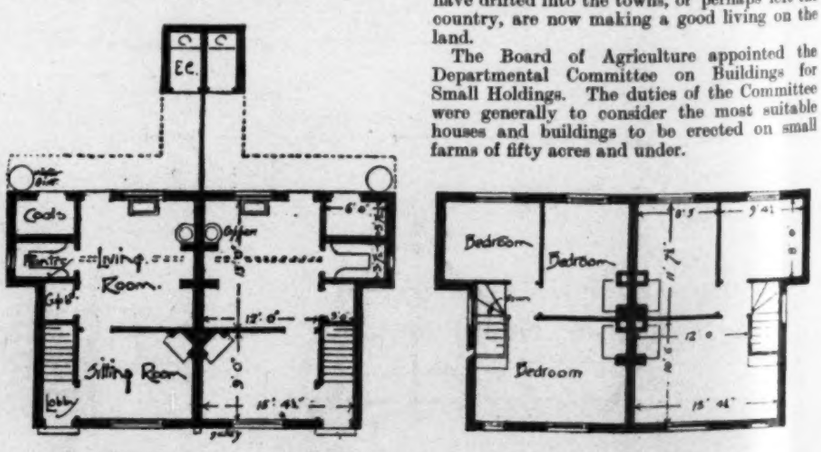
Probably the most successful steel-frame building in London is the Kodak building in Kingsway. Here the treatment throughout is that of the post-and-lintel type, and the lines of the stanchions are emphasised as in the two previous examples. But it will be noted that in this case there are no columns. The stanchions are treated merely as piers, and the material encasing them is not much increased beyond the structural necessities of the case; consequently a lightness of treatment is obtained which is infrequent in our modern architecture. The designer of the building has been content to let the lines of his structure speak for themselves; there is hardly any ornament. Some critics have said that the Kodak building would be admirable if placed in a street in a factory neighbourhood, but is unsuited to its situation in Kingsway. Presumably their objections are based on the studied plainness of the design. But in other directions we admit that a high artistic effect may be obtained without the use of ornament. We can admire, for instance, the lines of a racing yacht or the cut of a lady's tailor-made costume, and, if so, why should not the same appreciation of pure form be applied in regard to the design of our buildings?

A reference to the architectural treatment of steel-frame construction seems incomplete without giving one or two examples from America. There, in the skyscraper, the possibilities of this form of construction have been exploited to a much greater extent than can be done in this country, where the height of buildings is very properly restricted to reasonable limits. As an example of the verticality of treatment naturally suggested by the construction we have the Woolworth building, which is distinctly Gothic in feeling. Probably it will be agreed that the design would have been improved if the sham Gothic canopies and other archæological trimmings had been omitted and the building allowed to depend for its effect solely on its fine structural lines. Also the tower portion does not group very happily with the remainder of the building, but presumably this was unavoidable. A much finer grouping is obtained in the new City Hall, New York, and it may be conceded that a single building of such proportions erected as a centre of civic enterprise might with architectural advantage dominate a town and justly symbolise our modern spirit, as did the towering cathedral that of less materialistic age.

It may perhaps be thought that a lecture devoted as this is to the main principles governing the erection of buildings is a little out of place in a series dealing in detail with the Arts Connected with Building. But no matter to what pitch of excellence the building handicrafts, as we may term them, may be brought, a satisfactory result cannot obtain until the main designs of our buildings are evolved with due regard to the form of construction adopted. Although for centuries it has been the custom to consider architecture as deriving its direction and inspiration from previous styles, rather than from structural requirements, there are signs of an entire revulsion of educated opinion. As evidence of this I will conclude with a quotation from a leader in the *Times* last year, which was thought to be of such interest as to warrant a reference to it in the R.I.B.A. *Journal*.

The advocates of copyism of the architectural styles are treated to a piece of very subtle sarcasm. "We think," says the writer, "that a building cannot possibly be artistic unless it is in some style that we recognise. We should remember that, when the greatest buildings of the past were new, no one recognised the style in which they were built. No one in the thirteenth century praised Chartres Cathedral as a magnificent example of Gothic; and the audience which first heard 'King Lear' did not say, 'This is a magnificent example of the Elizabethan drama.' They praised it as a good play, if they had the wit to see that it was one; as for its language, it is the language that a poet of that time would naturally use to express himself. So when we see a good building we ought to praise it as such without asking any questions about its style. But often we are not aware of the beauty of our best modern buildings just because we are not conscious of any style in them. We say that they are mere building, not architecture; and yet if future ages discover any style of architecture peculiar to our time we may be sure that they will discover it in those buildings which solve without irrelevance some structural problem of our time."

An interesting series of lectures has been arranged by the Carpenters' Company for delivery on Thursday evenings from March 12 to April 23, excepting Thursday, April 9, at 8 p.m., at their Hall in London-wall. On March 12, by Mr. Lawrence Weaver, F.S.A., on "English Gardens"; Chairman, the Rt. Hon. the Earl of Crawford and Balcarres, F.S.A. March 19, by Mr. A. Hamilton Thompson, F.S.A., "English Monasteries"; Chairman, the Rt. Hon. the Earl Waldegrave. March 26, by Mr. E. B. Havell, "Indian Buildings"; Chairman, Sir Krishna G. Gupta, K.C.S.I. April 2, by Mr. Arthur L. Smith (Senior Dean of Balliol College), "Education Fifty Years Ago and To-day, as Exemplified in the Old Buildings of Christ's Hospital"; Chairman, Sir George Kekewich, K.C.B. April 16, by Mr. C. Delisle Burns, "The Use of Church Buildings in the Middle Ages"; Chairman, Sir William Chance, Bart. April 23, by Sir Hugh Beevor, Bart., "English and German Forestry"; Chairman, the Rt. Hon. Lord Barnard. The lectures will be illustrated by lantern photographs. Admission will be free by ticket, to be obtained from the Clerk of the Carpenters' Company, London-wall.



Cottages for Small Holdings of Five to Ten Acres.

Mr. A. Ainsworth Hunt, Architect.

(Erected in various places in West Suffolk at prices from £310 to £345 per pair.)

THE SOCIETY OF ARCHITECTS.

MR. A. AINSWORTH HUNT, Member of the Departmental Committee of the Board of Agriculture on Buildings for Small Holdings, read a paper at the meeting of the Society of Architects, on February 12, on "Buildings for Small Holdings," in the course of which he said:—

"We are passing through a period of general unrest, far-reaching in its influence. The architect meets with this in many ways. With the introduction of motive power in the production of all kinds of commodities the old mills and factories are being pulled down, and modern structures erected in their place, but a large number of the agricultural buildings are in much the same condition as they were at the beginning of the last century.

Cities and towns have grown by leaps and bounds, while the countryside seems more and more neglected. The population of the world is increasing fast, and every country is demanding more food. Agriculture should, therefore, be an important industry in every country. All the Continental nations are endeavouring to reorganise their agricultural systems, and are spending large sums to improve them. In 1912 England spent £220,000 in helping this industry; whilst France spent £2,000,000. Even a small country like Holland spent £30,000 more than we did. Signs are not wanting that England is at last beginning to realise the grave danger of her scanty food supply, and the necessity of giving more attention to agriculture. With the improvements that are taking place in all methods of cultivation, it is reasonable to suppose that the architect will be called upon to plan farmhouses and suitable buildings.

Partly with a view to offering an inducement to keep some of our healthy young people on the land, and partly to help solve the problem of our food supply, the Small Holdings Act was passed in 1909, and, in spite of the opinions of many of the large farmers and land owners that it would fail, in most districts it is working well, and some of our best manhood which would have drifted into the towns, or perhaps left the country, are now making a good living on the land.

The Board of Agriculture appointed the Departmental Committee on Buildings for Small Holdings. The duties of the Committee were generally to consider the most suitable houses and buildings to be erected on small farms of fifty acres and under.

In the course of investigations small holdings in various parts of the country were visited. Although we saw some buildings which certainly were very carefully thought out, the experience that was gained from these visits was principally what to avoid. Some of the Committee also visited Sweden, where farming is conducted on much more scientific principles and is decidedly more profitable.

The farmers in some of the Continental countries get much more value out of their land than we do, and this is largely owing to the industry and intelligence of a class which corresponds to the smallholders in this country.

Some of the dairy farmers in Denmark and South Sweden estimate that they make about £5 to £8 per acre per annum out of their land. From what I have seen of these countries I am of the opinion that their land is no better than ours, their climate not so good, and their means of transport are not equal to ours. Why, therefore, under more favourable conditions, should not English farmers do the same?

The matter for our consideration this evening is chiefly concerned with the question of the most suitable buildings for small farms or small holdings. The great problem in the proper equipment of a small holding is to provide, at the smallest cost, buildings which will be suitable and sufficient for the holdings concerned, but not in excess of their practical requirements. Insufficient or unsuitable equipment must lessen the productive capacity of the holding, while, on the other hand, excessive equipment must represent so much dead weight upon it, and involves the occupier in expenditure for which he can get no real return.

The first question to be considered in planning a set of buildings is: What is the land expected to produce?

Speaking generally, I think the buildings should be divided into three groups—(1) Market gardening; (2) general farming; (3) dairy farming.

The houses for each of these classes of holdings can be much the same, but the farm buildings must be especially arranged for the special purpose for which they are required.

The class of house to be erected must necessarily depend somewhat on the size and nature of the holding.

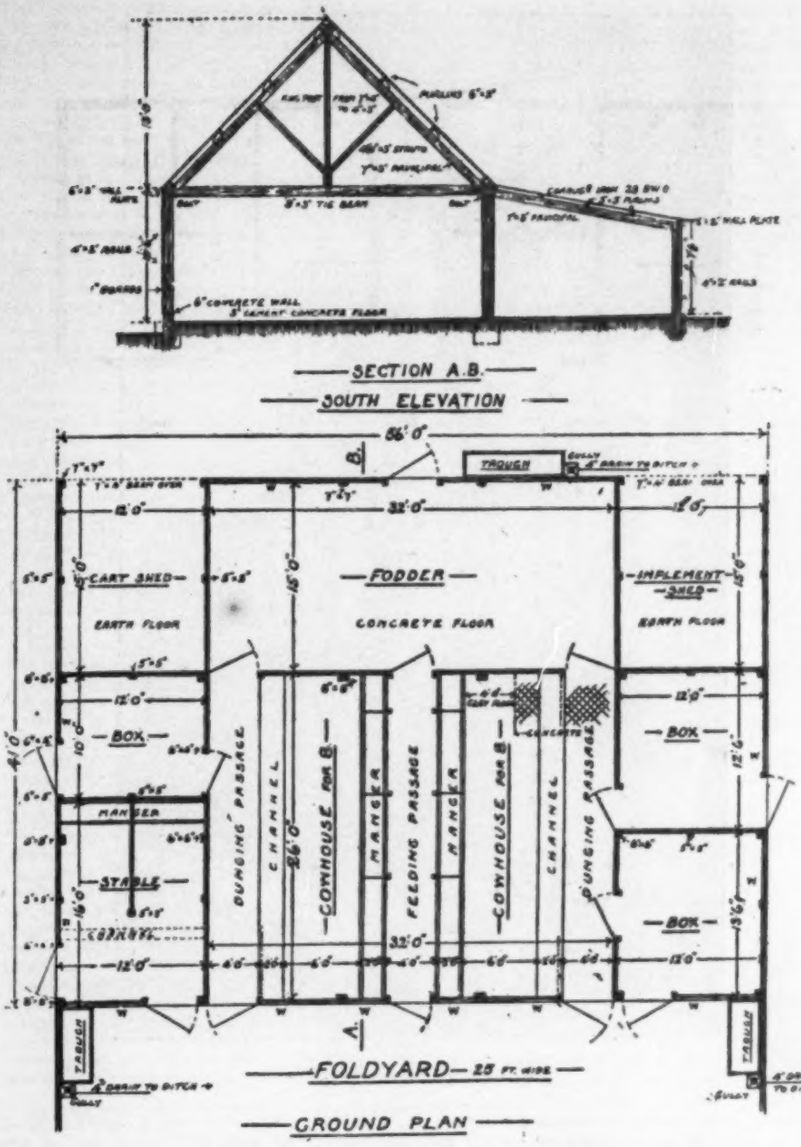
For a holding of, say, ten acres or under, which is not used as a market garden, a house of the nature of a labourer's cottage will be quite sufficient.

This should contain living-room or kitchen, 15 ft. by 12 ft.; scullery, 8 ft. by 10 ft.; larder, 6 ft. by 4 ft.; three bedrooms, 12 ft. 6 in. by 12 ft., 11 ft. by 9 ft., 9 ft. by 8 ft.

This arrangement may be varied by providing a small parlour and a combined living-room and scullery.

An earth closet should be provided situated away from the main building, and a good fuel store, at least 7 ft. by 5 ft.

As the holding increases in acreage the size of the house must be increased also. A holding of twenty-five acres should have a sitting-room or parlour.

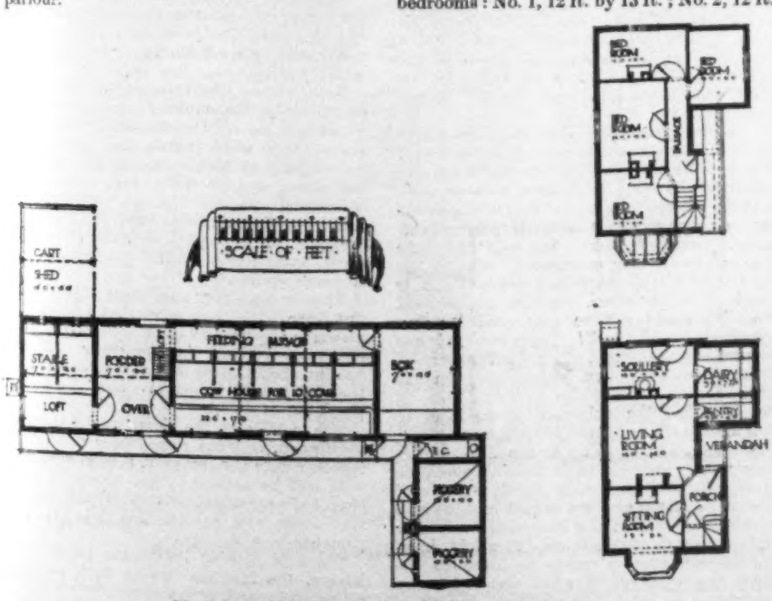


Building for Dairy Holding of Fifty Acres.

(From the Departmental Committee's Report.)

This house would then contain parlour, 12 ft. by 10 ft.; kitchen, 13 ft. by 15 ft.; scullery, 10 ft. by 9 ft.; larder, 6 ft. by 4 ft.; fuel store, 7 ft. by 5 ft. Three or perhaps four bedrooms: No. 1, 12 ft. by 13 ft.; No. 2, 12 ft. by 10 ft.; No. 3, 10 ft. by 10 ft.; No. 4, 9 ft. by 8 ft. In addition to the above, on most holdings a dairy will be required, the minimum size of which should be 5 ft. by 8 ft. This would only be sufficient for two cows. If the holding is to be devoted principally to dairy farming the size of the dairy must be increased proportionately."

The points in detail to be attended to were then considered in detail, and questions of site, drainage, and water supply discussed.



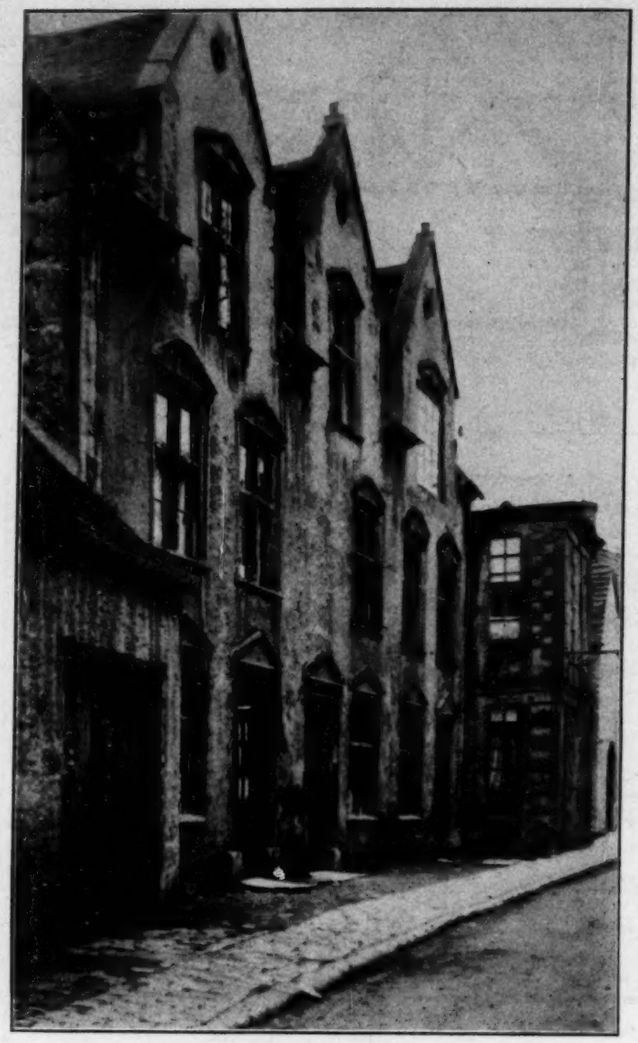
Homestead on a Small Holding at Bushbury.

The Farm Buildings.

"In considering the nature and character of farm buildings necessary to meet the convenience and requirements of smallholders it is obvious that the difficulty of laying down definite rules is even greater than in the case of houses. The house may be much the same, whatever the nature of the holding, but the farm buildings must be specially planned to meet the requirements of the particular holding concerned.

In planning the buildings allowance should be made for the possibility of future extension, and the type of buildings provided should be capable of being added to without much difficulty, only the minimum of accommodation should be provided at the outset. If the tenant is consulted beforehand care must be taken not to provide equipment in excess of what the holding can produce, for he will generally take a rather extravagant view of his requirements, without realising the extra amount of rent or interest involved.

The smallest type of buildings are those required for market gardening or fruit growing. The requirements for this will be:—A packing



Old Houses, Shepton Mallet.

shed; fruit store; stable and cart shed; a rough shed for tools and artificial manure.

A very good timber building of this class could be erected for about £100.

The equipment for an arable holding of 20 to 30 acres can be very simple, and would contain the following:—Fodder and chaff house, 14 ft. by 15 ft.; stable for two horses, 12 ft. by 15 ft.; cattle shed, 14 ft. by 18 ft.; cart shed, 14 ft. by 18 ft.

For holdings of larger size the chief additions would be the provision of loose boxes, cow stalls, and possible stabling for an extra horse.

The stables, cow houses, cattle sheds, etc., should be readily accessible from the barn or mixing house, so as to save labour in carting fodder.

It is most important that stock yards should be sheltered from the north and east winds, and at the same time open to the sun and air. The buildings are, therefore, best planned L-shape, and placed backing to the north and east. All the doors and windows should be on the south and west and opening into the yard. The cattle will thus, when in the yard, get all the sun and be protected by the buildings from cold winds.

The main object on a holding for dairy farming is to provide sufficient cow houses at the lowest possible cost. The cost will work out at about £10 per stall if built of brick and tile, and £6 or £8 if built of timber.

Cowsheds must comply with the requirements as to cubic space laid down by any regulations adopted by local authorities under the Dairies and Cowshed and Milk Shops Order. The usual minimum space is 800 cubic ft. per cow, in cases where they are habitually kept in the building, and 600 ft. where they are turned out for part of the day. The lower figure will be quite us much as is necessary on a farm. In calculating the cubic space it is usual not to allow anything above 12 ft. in height above the ground line.

The lighting of cowsheds is a matter of great importance, as good lighting is one of the essentials for clean milking. The simplest method is by glass tiles in the roof, but windows should also be provided both for light and ventilation. The space admitting light should not be less than 2 sq. ft. per cow."

INDUSTRY AND ART.

OWING to a sharp attack of influenza Sir Charles Waldstein was unable personally to deliver his final lecture on this subject at the rooms of the Royal Society of Arts. In his absence his paper was read by Sir Henry Trueman Wood.

Sir Charles's thesis was that the State ought to do something towards the advancement of public taste by means of its State-aided schools. He thought the subject apposite, because there was at the present time a good deal of discussion going on about methods of art training in this country. Some critics he knew said that there ought not to be any connection between the State and art training, but he could not concur in such extreme views, because pronounced personality could not be prevented by any system for declaring itself. Taste would always follow the work of artists, who not only expressed but impressed their own individuality on the spirit of the age.

He felt that the only avenue to improve public taste lay through the schools, elementary, intermediate, and right up to the Universities. In elementary schools such training could be only negative—that nothing grossly crude and inartistic in colour or form should be shown to the children. But in the intermediate schools positive work should be done. It would, however, he thought, be wrong to leave to the teacher the selection of what was right and what wrong in art. The resultant danger of discouraging intellectual sympathy would be too great. He was always sceptical of the dogmatic arbiters of taste. The teaching of art appreciation when the teacher pointed out what to admire and what to condemn was always bad. The historical method was the only one. Adequate text-books on art history should be provided, and should take their place alongside the ordinary history teaching. Any attempt to give an account of the history of a nation without bringing in its common life and its art would be futile and misleading.

Sir Charles said that he definitely recommended that no teaching of any period or place should be given without a supplement of illustrations of the most characteristic art-work then produced and a general account of its art. By this means the foundation of art appreciation would be securely laid. As the pupils advanced this training would become more thorough. The development of taste would naturally evolve from such studies, and would become wider and more catholic. The child would unconsciously to itself attain the attitude of mind that to produce great works of art was worthy of man's highest concerted effort.

Teachers in art schools should, he felt, be more than pedagogues. They ought to be practising masters of their craft. It was, he said, an important element in design that it should harmonise with, and be modified by, the material in which it was to be carried out. But this point was often pressed too far. Designers need not be tied down to the mechanical labour of one particular craft for the greater part of their time. This mistake was commonly made in England. But the most enlightened and commercially successful firms did not thus tie the hands of their artists.

In conclusion, Sir Charles emphasised the fact that taste could only be improved by prolonged, accurate, and intense study of the fine arts at their best. Originality was not killed or impaired by the study of the originality of others. It was only so when art teaching became academic and pedantic, when, for instance, the student was forced to make lifeless copies of stray and unconnected examples of bygone art. Art was, above all things, organic. It was impossible to convey its life and spirit without this organic quality. For this reason the industrial art worker must have passed through a thorough training in art history. The artist could not reproduce the smallest detail of any particular style till he had absorbed the synthetic meaning of that style. He should know also the whole art and life of that period, political, social, and artistic.

Finally, he felt that it was an important fact that not only would the artist's taste be widened and refined by such study, but, also, he would have gained a wide, general education, and made himself in the best sense a man of the world.

OLD HOUSES, SHEPTON MALLET.

SHEPTON MALLET, Somerset, is a quaint old place, its chief glory being the ancient church, with its bold but curiously-roofed tower and its fourteenth-century market cross, which was restored some years ago.

Besides these, there are several old buildings of interest to the architect, the most notable of which are the eighteenth-century houses, illustrated this week, which are situated in a narrow lane at Longbridge, on the outskirts of the town, and are little seen except by the inhabitants in the vicinity. They form an interesting group, with the bold and well-designed chimney-stack and the steep pitched roofs and gables, these producing a very effective skyline.

They are in a very good state of preservation, but have lately been somewhat spoiled by the insertion of a window at one end, out of keeping with the windows in the other gables, this having been introduced to give more light to the top room, which is used for business purposes.

The details of the doors and windows are very good, and the proportions of the whole, together with the grouping, is most satisfactory.

It will be noticed in the measured drawing that the centre gable is not equidistant from the other two gables, but this is hardly perceptible in the photo.

There is nothing interesting inside the old houses, the interiors having been modernised and the old work swept away.

WM. EATON, A.R.I.B.A.

ARCHITECTURE AND EFFICIENCY.

A LECTURE was delivered at the Sheffield University recently by Mr. W. S. Purchon, Lecturer on Architecture at the University.

Entitling his lecture "Architecture and Efficiency," Mr. Purchon said that the real meaning of the works of architecture of the past was rarely grasped. The great Greek temples, for instance, were seen to possess great beauty of proportion and remarkable refinement of detail, and the wonderful buildings of the Romans were rightly admired for their grandeur, but what was seldom grasped was the struggle towards perfect efficiency that was taking place when the buildings were being erected—the attempt to make the very best building for the definite purpose to which the building would ultimately be put. The deeper beauty which lay beneath the surface was rarely seen.

The misunderstandings which had gathered about the art of architecture led to much trouble during the eighteenth and nineteenth centuries, in England and elsewhere. It was seen that the great buildings of the past were full of beauty, but it was not realised that a great deal of their beauty was due to the fact that they were efficient solutions of definite problems—problems in which the local climate, the customs of the times, and the particular sites on which they were created played a considerable part. Instead of seeing their own problem clearly and trying to arrive at the most efficient solution, the architects of the various revivals neglected important factors in their own problem, so that the general appearance of the building would resemble some famous architectural masterpiece. Unfortunately, their method of designing was still lingering on in some quarters, fitting in with another great misunderstanding—that architecture was an art which belonged to distant times and places.

Architecture was a matter which concerned us here and now. Proceeding to consider one or two present-day problems, the lecturer referred to houses, perhaps of all buildings the most important. There were still about 16,000 back-to-back houses in Sheffield. He could not guarantee the figures, but he was perfectly sure there was a large number of houses in the city which ought not to exist. How did the accommodation in those houses compare with that in workhouses and prisons? How did it compare with that provided for race-horses? Back-to-back stables were not built. Engineering plant must be efficient, and when superseded it must be scrapped, but we were not ready enough to scrap out-of-date, inefficient houses, the possession of which was not economy but a gross extravagance, which gave pleasure to no one and which no community was wealthy enough to afford. Yet, he supposed, in every community there was a standard below which a house must not fall, or it would be closed as unfit for human habitation. Evidently it was necessary for that standard to be raised, and to be raised considerably.

He wanted to suggest a new standard, below which houses should be pulled down as unfit to be seen. For there were vast numbers of houses, in the cities of this country which did one positive harm every time one saw them—and most of us were obliged to see them. Not only did he deny that such houses served any useful purpose, but he claimed that they were a positive danger. It might be argued that if such houses were necessary they ought, in a scheme of town planning, to be put where one need not see them, but he claimed that while they were allowed to exist everyone ought to see them to realise what they meant. And most certainly the name of the owner ought to appear legibly on each.

The lecturer proceeded to give details of various types of small houses that have been erected in several "garden cities." Speaking of the general appearance of houses, he said that for a house to be really efficient the front must be beautiful and the back no less so. It was not necessarily more expensive to make a house pleasing in appearance than otherwise. He had seen many a house which could have been built more cheaply and yet made more beautiful.

To a great extent, beauty in architecture was a matter of arrangement of forms and proportion, and good proportion was not necessarily more expensive than bad. In addition to the sanitary point of view in the siting of houses there was an æsthetic side to the question. Long rows of small houses, however well designed, tended to become wearisome and monotonous—and they were rarely well designed.

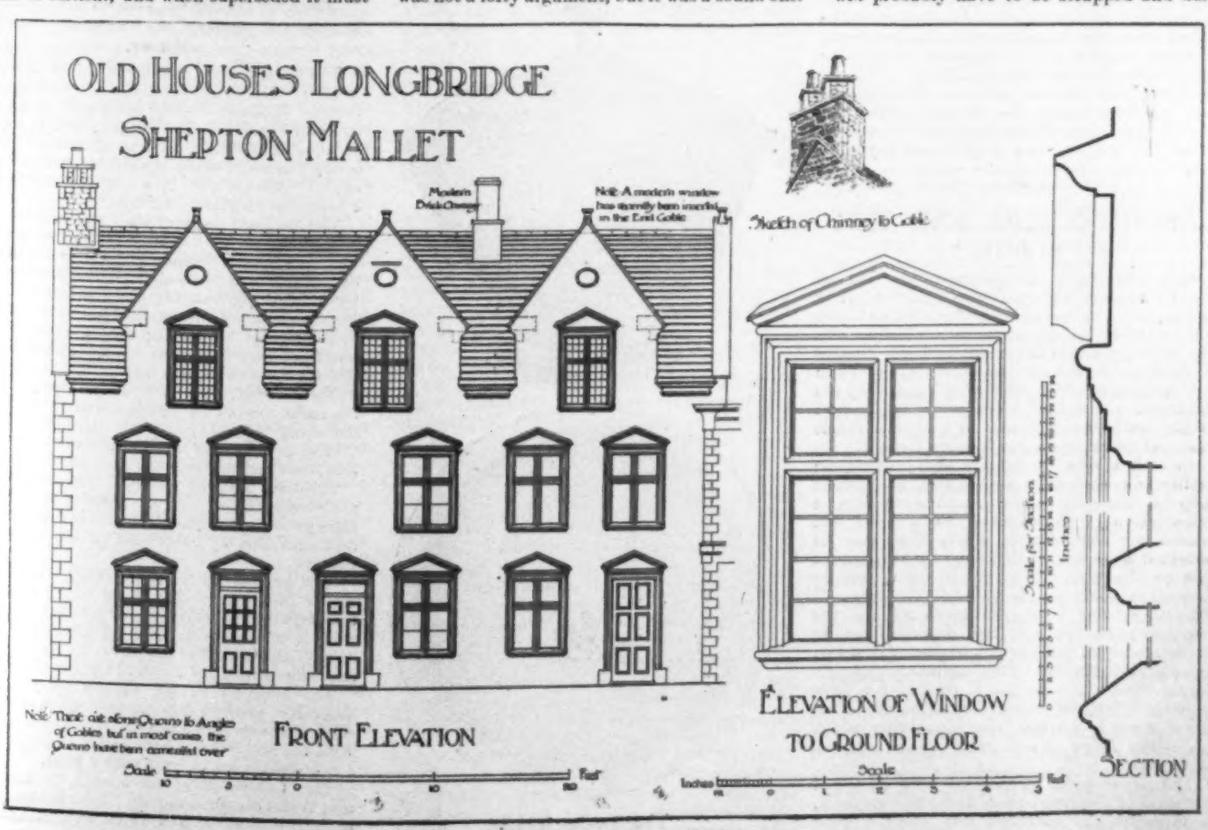
The problem of the shop was by no means an easy one. So many of the streets of our cities were ruined by the modern shop fronts, which consisted of nothing but plate glass. Fortunately shopkeepers were in increasing numbers realising that beautiful goods showed to better advantage in a beautiful frame than in an ugly one. They were, in fact, actually discovering that there was money in architecture! It was not a lofty argument, but it was a sound one.

Speaking of the refining influence of architecture, Mr. Purchon said he was willing to admit that many intelligent people derived little conscious pleasure from architecture or felt little displeasure at the sight of ugly buildings, but he was convinced they were influenced by the buildings which surrounded them, though perhaps without knowing it. The Central Public Library in Sheffield was, to him, a fine example of the influence of buildings on the human mind. Personally, he approached it in a half-ashamed way, and if he saw anyone about with whom he was familiar he passed on as if he had not intended to go in. With what a different feeling one entered, say, the British Museum or the central library of almost any town in England half the size of Sheffield.

"Architecture," he concluded, "is a matter which concerns all of us, here and now. It is not a matter of going somewhere to see something. It ought to be all around us, and, if it is not, we ought to want it, and we ought to let our wants be known clearly and definitely. We are thorough in some things; we want the best in machinery, motor-cars, and railway engines, but for some reason we seem more or less willing to put up with terribly inefficient buildings and towns. In Sheffield there is little to compare with the schemes I have shown you. As a matter of fact, such schemes would probably be unsuitable, for they are solutions of quite different problems.

But in this city little thought seems to have been spent in arranging buildings as part of a complete scheme. We have no roads leading up to our main buildings, the stations are buried away, as if they were things we must tolerate but do not like, and we have by no means made the best of the opportunities provided by our beautiful situation.

In judging the success of Sheffield it is not enough to talk about the development of the steel industries. Surely prosperity in such work should lead to the living of fuller and nobler lives, and should show outwardly in the general appearance of the city. I understand we are to have town planning in two suburbs and a new road here and there, but I firmly believe it is little good doing odd bits in Sheffield. What is needed first is a complete scheme for the ultimate development of the whole city, and our energies ought to be devoted to that rather than frittered away on oddments. If we do the oddments first—as we probably shall—when the complete scheme is considered, as it ought to be now, but probably will be in ten, twenty, or fifty years, the oddments done in the interval will probably have to be scrapped and during



Drawn by Mr. W. Eaton, A.R.I.B.A.

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the next fifty years large portions of the city must be rebuilt.

The whole scheme must be dealt with some day; there is no escaping that. Why not now, before more streets are laid out in the wrong places, before more new buildings are erected where streets ought to be cut through or where open spaces ought to be arranged? Think for a moment what Sheffield would be like now if Sheffielders fifty years ago realised to the full the value of efficiency in architecture, had they tackled the problem with a broad mind, obtained the best possible advice, and developed Sheffield on the right lines during those fifty years! If we think of this I believe we shall realise how our work will be appreciated in, say, fifty years' time if we tackle this great problem thoroughly and now."

THE VICTORIA AND ALBERT MUSEUM.

By a generous act of private munificence the Victoria and Albert Museum has just come into possession of one of the most beautiful existing examples of a mediæval English craftsman's work, the silver-gilt covered bowl formerly at Studley Royal Church, near Ripon. Mr. Harvey Hadden, the donor, has for some time past shown his interest in the building up of a worthy representation of English silversmiths' work in the Museum. The bowl is chased and engraved, the decoration consisting of leafy wreaths that form, both on bowl and cover, what has been happily termed "a sort of tree of knowledge," inasmuch as they bear on short stalks the characters of a black-letter alphabet, preceded by a cross and concluded by a group of contractions used in mediæval Latin manuscripts. From the character of the design and of the lettering it is evident that the bowl dates from the latter part of the fourteenth century.

The bowl was examined and discussed four years ago by the Society of Antiquaries, and is fully described and illustrated in Mr. Jackson's "History of English Plate." A faculty for the sale of the bowl for the sum of £3,000 was granted about a year ago, and at the time was the subject of some discussion. By the decision of the Chancellor of the Diocese the power to sell was made conditional on the object being acquired for the national collection at the Victoria and Albert Museum—a condition which goes far to meet the claims of objectors, and one which it may be earnestly hoped will be observed as a precedent for any similar case in the future. It remains to be stated that the acquisition of the bowl was rendered possible by the kindness of another friend of the Museum, Mr. C. J. Jackson, F.S.A., who, with the utmost readiness, advanced the sum required during the interval which has elapsed, and by whose intervention at the outset the proposal now happily accomplished took shape.

ARCHITECTURE AND THE STAGE.

"MR. GRANVILLE BARKER'S production of "A Midsummer Night's Dream" at the Savoy is unusually original in its setting and methods, but we think that the apron stage, which had its merits as applied to the production of "Twelfth Night," rather defeats the object aimed at in "A Midsummer Night's Dream," and that the minimum amount of scenery which is used rather destroys the illusion in a piece which is first and foremost an imaginative fantasy.

In such a case the definite division between auditorium and stage is, we feel, a valuable help in suggesting mystery, and more than in other plays of Shakespeare we can see real reason for the utmost effects that can be obtained by scenery. The appeal is throughout one to the eye, as the music which usually accompanies the play is absent. The dramatic interest in such a play is almost *nil*, and the popularity of the play has depended on its being seen with full accompaniment of dancing, music, and singing. The curtain, with its conventional vine design, is frankly far from pleasing; but the mound in the middle of the wood scene is an excellent innovation which materially helps to add effect to the dancing and revels.

The palace scene at the end, with its broad peristyle of steps and black-and-white columns, is excellent and effective, and forms a good background for the play within a play which is given. The scene is admirably conceived and arranged; here the effect of the acting audience lying on couches, with their backs to the auditorium, is most successful. There is much excellent acting, but we feel that a male and adult Puck destroys our illusions and detracts from the fantasy of the piece; neither do we think that the part of Oberon is best rendered by a man. But, when all is said and done, it is an experiment which will be of great interest to all who see it.

In striking contrast to "A Midsummer Night's Dream," the recent production of "Hamlet" at the New Theatre, as it is supposed to have been acted in 1600, effectually demonstrates that there are plays which lose little if nothing from the elimination of scenery, which there consisted of nothing but an arrangement of darkly-coloured curtains, the only suggestion of scenery being the peep of starlit sky as seen from the castle battlements at Elsinore. The presentation of the Queen as an elderly woman and that of the King as a young man are open to question dramatically, whatever custom says, but there was much to say for the novel rendering of the melancholy Hamlet, who struck us as being nearer to truth than the more familiar renderings of the past.

In Mr. Zangwill's "Melting Pot" at the Queen's we have some fine backgrounds taken from New York, and effectually giving interest to the writer's powerful representation of that most potent melting pot of old-world ideals and prejudices America.

At the Aldwych Theatre a rendering of a play which recalls "The Prisoner of Zenda" is given under the title of "The Queen's Champion." We have everything in the way of scenery and uniforms, the latter somewhat suggestive of those of a South American republic. If not convincing, the piece is at least not without a certain melodramatic effect, which is possibly what is really aimed at.

ARCHITECTURAL SOCIETIES.

Yorkshire Architectural and York Archæological Society:

The Norman Church at Brayton.

At a meeting of the Yorkshire Architectural and York Archæological Society, held in the Museum at York, the Rev. Dr. Solloway, Selby, delivered an illustrated lecture on "The Norman Church at Brayton." He said there formerly existed at Brayton a Saxon church, but of its site nothing was known. There were people who held the impression that it stood on the site of the present church. This was purely a conjecture. The Norman church must have been built about 1125, and as it existed to-day was a mixture of the architecture of all times, from Norman down to early Victorian. The original Norman church probably consisted of an aisleless nave, with perhaps a rectangular chancel, and a beautiful south doorway, with at the west end a square tower. So it would remain until the fourteenth century, when certain alterations were made. It was a matter for the deepest gratitude that when these alterations were made the authorities decided to keep the beautiful Norman chancel arch. It was not easily to be beaten, and was worthy of anyone's careful attention. In the fifteenth century there were further changes, and about that time the octagonal spire was added. It was a matter for thankfulness that when such radical alterations were made the builders did not decide upon an absolutely new tower. They left what was there and simply gave additional height. The chief glory, however, of Brayton Church was its beautiful south doorway.

The Studley Bowl.
Victoria and Albert Museum.

Sheffield Society of Architects and Surveyors:

The Value of Reinforced Concrete.

"Reinforced Concrete and its Application to Architectural Building Work" was the subject of a lecture delivered by Mr. Gilbert Heathcote, B.A. of London, at a meeting of the Sheffield Society of Architects and Surveyors held at the University on the 12th inst. The President of the Society (Mr. A. F. Watson) occupied the chair.

Mr. Heathcote gave clear and concise facts to show that reinforced concrete is a material which has come to stay; first, owing to its ever-increasing strength, and, secondly, because no annual maintenance charges of any consequence have to be expended upon it. The lecturer strongly deprecated the present methods generally adopted by users throughout the country in dealing with reinforced concrete designs and estimates. He outlined what he thought to be the best manner in which to undertake work of this nature, in the interests of the architect, his client, and the contractor, and also, as he considered, in the interests of the whole future progress of this form of construction in England.

The lecture was illustrated by many interesting lantern slides.

Nottingham and Derby Architectural Society:

Schools for Mentally and Physically Defective Children.

The third general meeting of this Society was held at 64, St. James-street, Nottingham. Other business being disposed of, the President called upon his son, Mr. C. A. L. Sutton, A.R.I.B.A., of the Architects' Staff of the London County Council, to read a paper upon "Schools for Mentally Defective and Physically Defective Children."

The lecturer pointed out that there were several classes of mentally defective children, viz., backward children, slightly mentally defective, and imbeciles, and among the physically unfit were cripples, children suffering from tuberculosis, heart trouble, paralysis, and other physical infirmities; while the deaf, dumb, and blind were in another special class, which he did not propose to deal with in his paper.

The mentally defective schools are built, as the name implies, for children who are mentally deficient, but the question naturally arises, "Who is to decide what children come under this head and are to enter such schools?"

Children who, by means of mental defect, are deemed to be unfit for ordinary elementary schools are nominated for medical examination and examined by one of the Council's medical officers.

The medical officer is furnished with a full report from the teacher of the school at which the child is in attendance, and if he is of opinion that it is a suitable case for admission to a school for mentally defectives he certifies in accordance with the terms of the Act of 1893.

The majority of the schools for mentally defective children are visited by a medical officer at least once a quarter, and, in compliance with the regulations of the Board of Education, a re-examination at least once a year.

The total number of schools in England and Wales is approximately 170 for the mentally defective, ninety-two of which are in the London County Council area and accommodate,

roughly, 9,000 children. The schools for physically defective children in England and Wales number something like seventy, of which London has forty, accommodating 5,000 children. There are about fifteen schools for mentally defective and six schools for physically defective children in course of erection or just completed.

These non-residential schools are placed under the care of specially selected managers, who, by their local knowledge, experience, and influence are able to give the Council much valuable assistance in many directions. The managers are appointed every three years—the same period as the managers of elementary schools.

Dealing next with the particular needs and points governing the planning of this type of school, Mr. Sutton said that the Board of Education regulations meant that the basis of a school is two classrooms of twenty, and all above that number can be twenty-five. Every child must receive manual instruction, and it is undesirable they should receive it in company with children attending elementary schools. It practically means every mentally defective school must have a manual instruction room. The Board of Education now allow this room to be counted as accommodating twelve places extra to the accommodation.

The regulations require 15 sq. ft. of floor area per child in each classroom; this gives classrooms of 300 sq. ft. and 375 sq. ft. for twenty and twenty-five children respectively. The hall must contain not less than 3½ sq. ft. of floor area per child, as in elementary schools.

The offices for mentally defective children must be detached from the main building, and therefore there must be separate playgrounds for boys and girls, which playgrounds must have at least 30 sq. ft. of ground area per child. This, excepting where sites are "little gold mines," should not be taken as the maximum; it is stated as the minimum, and for small schools it works out to a surprisingly small area. The code says "provision must be made for medical inspection at least once a year." In the case of the Council's schools the medical officers visit the schools about once a month, and require a room in which to carry out their examinations. The parents of the children are notified of the date and time the examination will take place, and they may accompany the child for the examination. Everyone would admit that there should be a special room, but it means extra cost, and did it warrant the expenditure, considering the limited time it is being used? No special room was provided; and, in fact, he only knew of one school that had a special room, and this school was an adaptation, and here a room suitable was at liberty. The alternatives were to use the teachers' room or turn out a classroom. The teachers generally object to the examination being carried out in their room, especially as the children and parents are sometimes not too clean. Turning out a class means having to find accommodation for the class somewhere else for the time being, and this method is adopted in many of the schools.

The doctors do not ask for a special room as the teachers' room or a classroom appears to suit them; a weighing machine and height measure are supplied to each school, which can easily be put in the teachers' room or classroom. The vision tests, of course, on account of the distance required, must take place in the hall. He was of opinion that there should be a special room provided for the medical inspection, and a small room was all that was required.

Another point affecting the planning was that all mentally defective children who require it were regularly bathed, and the scheme for cleansing verminous children attending ordinary elementary schools had been, as far as practicable, applied to the special schools. This scheme provides for the separation of verminous children from other children in the school.

The bathrooms provided were large enough to take an ordinary size bath. Needle or shower-baths had been tried, but were not so satisfactory as the ordinary bath. The bath attendant had several children to bathe, and the ordinary bath did not necessitate so much stooping on her part and allowed the child to be immersed or lie in soak, which was sometimes necessary.

He thought a small-sized parallel bath, not too wide, on a wooden platform (or tiled platform would be better), raised about a foot to 18 in. off the floor, would make an ideal arrangement. He advocated a small-size bath, because it was filled and emptied more quickly than an ordinary bath, and did not take so much hot water. The hot water was generally supplied by a geyser.

Another large factor in planning and fitting up these schools—and he now included physically defective schools as well—was that it was found that the children could be taught various forms of manual instruction which enable them to earn a living, or partially so, when they leave school. Therefore we found schools in which tailoring, boot-making, metalwork, handicraft, joinery, chip-carving are taught. The ordinary routine of these schools differed considerably from the elementary schools, such work as netting and string-work, rug-making, chair-covering, basket-work, etc., being included.

These schools were built for, or divided up for, either junior mixed children, elder girls, or elder boys. The education officer, in his report, states that "the arrangements which have been made for the training of elder mentally defective boys continues to show good results. Experience has proved that a large proportion of the mentally defective cannot earn their living entirely or even partially by any means other than manual labour."

The value of manual instruction introduced into the curriculum of these schools was shown in the after careers of the boys. In many instances the work done by these boys after leaving school compared favourably with that of children from the ordinary elementary schools. Of 295 boys who left the elder boys' schools during 1906–1910, 90 per cent. were in employment earning an average weekly wage of 8s. This, he thought, proved that there was sufficient ground for building special schools suitable for instructions in manual-training work.

From the foregoing remarks they would see that, roughly speaking, architects were tied to certain details in planning. The main points were: The size of classrooms and hall; there must be a kitchen and scullery, with necessary provision stores, etc.; teachers' room and medical-inspection room and bathroom; special classrooms for manual instruction.

Dealing next with the schools for physically defective, Mr. Sutton said that in these more actual assistance was required, and special desks and invalid couches and chairs provided, and therefore the classrooms must be larger, and, according to the code, 18 sq. ft. of floor per child is necessary.

The children have a common entrance, and the ambulance in which the child travels to and from school must have a suitable entrance and space in which to turn round.

The London County Council have fifty-five specially constructed horse-drawn ambulances, which are supplemented by thirty-six hired omnibuses or other vehicles. It is estimated that 2,400 children are conveyed to and from school by ambulance or omnibus each school-day during the year. The children require feeding in the middle of the day, therefore a kitchen, scullery, etc., have to be provided.

The bathroom is not provided, as the children, not being mentally defective, can be taught to keep themselves clean.

In dealing with the consumptive schools, the lecturer mentioned Kensal House School, in which the whole training of the children was a fresh air one. Every classroom has casement doors, and practically all the windows are open, and when the weather permits four classes are held in the open air. The desks are in the playground, and when not in use are covered with tarpaulin. In the playground also is a covered shed for manual work.

All architects will agree that a school for these children should be built on hospital lines, the floors of impervious materials, no mouldings, no corners—in fact, a school sanatorium.

The education of mentally and physically defective children is a very serious question, and the great problem is to prevent this class from increasing. But whilst we have them it is only humane that we should educate them and make their life happier and brighter and their outlook on life as wide as possible, and he was sure they would agree with him that by erecting schools suitable for the education of this class of children we are making a step in the right direction.

At the conclusion of the lecture Mr. Eaton (Derby) proposed, and Mr. A. E. Heazell (Nottingham) seconded, a vote of thanks to Mr. Cecil Sutton, which was heartily agreed to.

Glasgow Institute of Architects.

At a quarterly general meeting of the Institute of Architects in the Secretary's Chambers, 115, St. Vincent-street, Glasgow, Mr. Charles R. MacKintosh, F.R.I.B.A., Vice-President, in the chair, the Secretary reported with regard to the matters dealt with by the Council since the previous general meeting. The following were the principal items:—(1) The election of Mr. Jas. Carruthers to the Council in consequence of the death of Vice-President R. D. Sandilands. (2) Motherwell Housing Scheme Competition—assessor appointed on the recommendation of the Institute. (3) The reference made to the death of Mr. Honeyman, R.S.A., a former President of the Institute. (4) Conference with Building Trades Federation *re* Building Contracts. (5) The Institute's suggestions regarding Cathedral-square lay-out. (6) The architectural design of the proposed Cross River Bridge.

Glasgow Technical College Architectural Craftsmen's Society.

At a meeting held on the 13th inst. Mr. T. G. Gilmour, A.R.I.B.A., in the chair. Mr. Donald Gair delivered a lecture entitled "Restoration of an Historical Building." He dealt with the restoration of ancient buildings in general, and drew a distinction between restoring and preserving. Most restorations are carried out under the Board of Works, and even those in Scotland are controlled from London. The work is executed by contractors at rates for wages, etc., previously arranged. Restoration work should be left distinct, and not coated with sooty water, as is often done. The foundations of many ancient buildings were very shallow, often seen protruding above the ground level, and were composed of large flat bedded stones, laid dry. Castle walls were found to be 13 ft. thick at the foundations, 8 ft. at the first and 6 ft. 6 in. at the second floors. Much money was often spent strengthening foundations, when the fault really lay in the roof thrust. The joiner-work and plaster-work of the old castles were plain and substantial, but the plumber did not seem to be in existence in those days.

CORRESPONDENCE.

A New Attitude towards Old Buildings.

SIR,—By giving an extract from the R.I.B.A. *Journal*, Vol. XX., p. 547, in order to illustrate the historical standpoint for the preservation of ancient monuments, and by building up from that standpoint an elaborate case against certain extreme views held by a very small but very insistent minority, your leading article in last week's issue leaves, no doubt inadvertently, the impression that those extreme views are voiced in the paper quoted. The treatment of monuments is dealt with in some detail farther on (pp. 595-6). Here are discussed the distinctions between the treatment of "living" and "dead" monuments, between repair and renewal or additions.

As so many considerations enter into the problem, it may be deduced that no hard-and-fast principle for the conservation of ancient monuments can be laid down. The standpoint that the first consideration should be the preserving of "the expression of the ideas of the past" would not solve the difficulty. To take an extreme case. To preserve the expression of those ideas was probably the governing principle of those Italians with whom the decision lay for the rebuilding of the campanile of S. Mark's, Venice, but the *Builder* at the time (August 30, 1902, p. 179) pointed out that an exact copy was by no means the same thing, even though the greater part of the remains was incorporated in rebuilding. The treatment of old buildings cannot be referred to one fundamental rule, but each case must be dealt with on its merits by those who, thoroughly trained and experienced, can weigh the cost of preservation to history and art.

While not agreeing with your leader-writer's solution of a difficult and complicated problem, most architects will sympathise with his reasons for making the attempt. May the others never see their own buildings repaired with tiles and other alien material according to the fancies of strangers!

W. J. DAVIES.

Barnsley Town Hall Competition.

SIR,—This competition has been banned by the Society of Architects, and its members have been requested not to take part therein owing to the unsatisfactory nature of some of the conditions. I ask your co-operation in

enabling me, through the medium of your paper, to get into touch with other responsible architects, especially those who do not belong to any architectural body, and to invite them to act in unison in this matter. The remedy is in the hands of individual architects, and it is in their own interests and that of the profession of which they are members that they should refuse to have anything to do with architectural competitions the conditions of which are not in accordance with certain recognised principles

It is not so much a question of membership in any architectural body as of membership in the profession. The object of promoters presumably is to obtain the best professional services, and it is time that architects, as well as architectural societies, should use every effort to convince promoters that competition regulations which do not embody the essential requirements of the profession cannot achieve their object, and also that there is such a thing as professional etiquette in the architectural profession.

C. MCARTHUR BUTLER,
Secretary of the Society of Architects.

Church Architecture.

SIR,—In a recent leading article you suggest that from an architectural point of view Gothic is not the most suitable style for modern churches. May I suggest that, in selecting a style for a church, we should be chiefly guided by other than architectural considerations?

A church is erected primarily for the purpose of worship, and its architectural character should be that best suited to induce a reverent spirit in the worshippers. No arrangement of wood and stone can be objectively religious or irreligious. It is almost entirely a matter of association. The vast majority of Anglican Churchmen are accustomed to Gothic ecclesiastical buildings, and the style is definitely associated in their minds with the idea of religion. This should be a sufficient reason for its adoption for all Anglican churches.

Little importance need be attached to the historical association of the Basilican plan. Our duty is to the Churchman rather than to the archæologist.

The difficulties of the adaptation of Gothic to an improved type of plan should not prove insuperable, and would afford a new and interesting object for the consideration of church architects; but we must be careful lest an egotistical desire for some new thing lead us to break too abruptly with a venerable tradition.

EDWIN SMITH, P.A.S.I.

Wells Cathedral, Somerset.

SIR,—At the request of my Committee, I am writing to ask if you will kindly insert this letter, which expresses its view on the work done at the Cathedral during the past year, which was referred to by Mr. Thomas L. Tudor in his letter to you which appeared in your issue of November 28, 1913.

First, as to the Chapter House crypt. The work undertaken to bring this part of the Cathedral into use again as a vestry is in intention thoroughly in accordance with the principles of this Society, and the execution leaves little to be desired.

As regards the work done in connection with the warming of the Cathedral, my Committee realise the great difficulties met with in undertaking this work, which may fairly be classed under two principal heads:—(1) The choice of system; (2) the arrangement of the system chosen.

As to the choice of system. The old stoves have been removed because they were not considered sufficient to warm the building effectively, because they made it dirty, and because the stoves and pipes are ugly.

The system chosen and installed is more efficient as regards warmth, but it may prove equally dirty, for a dark smudge of dirt usually appears on the surface of walls above radiators and hot pipes; again, the radiators and pipes are not only ugly, but necessitate the cutting through of walls, and in some places the destruction of the original architectural features, as, for instance, parts of the plinth of the stone seats against the walls of the aisles. These are not all the disadvantages in connection with the installation; perhaps the chief is the erection of a heating furnace chamber and a chimney from the same. Accepting the system chosen, however, my Committee believes it might have been arranged in some points with a little less damage to the Cathedral. There are few things so liable to change in a short time as are the various systems of heating, and therefore any work done in their installation should undoubtedly be done so that when their day is over they may be removed without leaving any marks upon the fabric. In the case we are considering, perhaps the two chief points where removal of this kind would not be possible are where the furnace chamber has been built into the wall of the Cathedral, with its chimney in the buttress of the Chapter House, and, secondly, where the plinths of the wall seats have been cut for the radiators. My Committee believes that efficiency could have been obtained without cutting into the structure in either case.

The attention of my Committee has been drawn to the renewal of large portions of the angle gateway from the market to the Cathedral Green. It trusts that the resulting loss of interest and beauty which is now so apparent will have the effect of causing no further work of repair to be undertaken without careful preliminary consideration of the means to be adopted.

That repair was urgently necessary there is no doubt, and this Society would have been the last to say otherwise, but it was repair not renewal that was needed. In the work done, however, many old stones were cut out which might have been repaired; others have been added, of which no part remained, in the manner commonly called "restoration," and this without any structural purpose.

A. R. POWYS,
Secretary, Society for the Protection of Ancient Buildings.

Amending Lowest Tender.

SIR,—I was much interested in "Contractor's" letter, headed "Amending Lowest Tender," and appearing in the last issue of your valuable paper.

Does "Contractor" feel the conduct of the public body in question should receive condemnation for their having accepted at all so low a price and one in which it would appear (in comparison with the list of tenders published) an error had been made? If so, I heartily agree, as, viewed quite impartially, for any person or persons (public bodies most certainly included) to take advantage—as apparently is so very often done—of obvious mistakes on the part of a contractor savours of dishonesty.

As to an increase of £100 being allowed on the quoted figure, one would need to be in possession of the actual facts and circumstances of the case, without such I submit it is not possible for anyone to judge equitably.

I contend that, in regard to tenders and tendering as a whole, much reformation is desirable—aye, necessary—and suggest a scheme could be readily inaugurated that would fully protect both client and builder, while allowing the latter to have at least a fair return for his labours.

NOT TENDERING.

Competitions—*Town Livers*—Motor and Cycle Sheds.

SIR,—Your correspondent, Mr. Maurice E. Webb, with a light and delicate touch, has evidently some knowledge of the subtle subterfuges by which modern journalism seeks to draw out the poor confiding architect, exploiting him possibly for its own glorification, and not altogether as suggested for the benefit of architecture.

Undoubtedly the opportunity to be afforded the successful competitor is a very alluring one. It will, doubtless, attract many—an unusually large sprat sometimes catches quite a decent-sized herring—and for that reason, if only to keep the younger members of our profession busy, its appeal should be potent in its result. It is open to question, however, whether the serious-minded will welcome entirely the proposals of *Town Livers*. To us it would appear the premiums are quite inadequate, for the production of a standard motor garage, cycle shed, or any other building to be erected in London and the provinces requires a mental effort worthy of far greater reward.

Perhaps if *Town Livers* were shaken up landlords might come forward in hundreds, instead of tens; with an added fillip of this nature the proprietors might obtain that which they most desire. The power of the Press is great; may it always continue in a disinterested way to foster architecture and architects!

JAMES A. SWAN.

Quantity Surveyors' Fees.

SIR,—The subject of surveyors' fees and their bearing upon indifferent quantities, which was exhaustively dealt with in your columns some little time ago, has again cropped up owing to the action of one of the public bodies in London.

An advertisement recently appeared in your paper inviting tenders from quantity surveyors for taking out quantities for a reservoir containing about 7,000,000,000 gallons for the Metropolitan Water Board. It is hardly necessary to point out that this is a very important contract, involving a large sum of public money, probably approaching £1,000,000, and that in such a case it is extremely desirable in the public interest that the best class of work should be employed. If, for instance, any individual or public body were involved in litigation with such an amount at stake they would hardly approach it by advertising for the cheapest firm of solicitors and the cheapest counsel to assist them; yet this is analogous to what has happened in the present case.

The Metropolitan Water Board have a list of surveyors whom they are supposed to employ regularly on their work, and the fees for the work are extremely low, perhaps owing to the fact that the Surveyors' Institution have never published a scale of charges which might form a guide to public bodies, in the same way as has been done by the Quantity Surveyors' Association. In spite of having such a list, however, the Metropolitan Water Board have advertised for public tenders without regard to the standing of anyone who might offer to do the work. I must say that I think this is a mistaken policy, whether applied to surveyors, architects, or any other professional men, and I think strong pressure should be brought to bear by the various professional bodies in London to avoid such an occurrence in future.

It is said that "you should never prophesy unless you know"; but I venture to prophesy that the work will be taken at a ridiculously low rate, and not by any leading firm of surveyors. I know from actual experience that this policy in previous cases has resulted in unqualified men being employed by the firm who secured the work, at very low prices, with the result that the quantities were most indifferent, and great difficulties resulted in the final settling up of the contracts, with consequent trouble and expense to the employers.

This is not real economy, as it nearly always results in the contractor being able to enforce claims for extras which would not arise if the quantities were properly taken in the first instance and the variations were properly measured by a competent man.

It is most inconsistent and reprehensible that public bodies in the largest city in the world, who pride themselves on insisting that the standard rate of wages shall be paid to mechanics employed on their work, should at the same time give every inducement to professional men to underpay their assistants. It follows, as a matter of course, that firms who employ first-class men and pay them reasonable salaries, have no chance of competing with those whose only object is to get through the work as cheaply as possible.

F. S. I.

The Machinery Users' Association.

SIR,—The accuracy of our statement to you was questioned by the solicitors to this Association, but the enclosed extracts from their own reports of last year will show you who is right.

The solicitors also omitted to state that we had an action pending against the Association for £20,000 for money owing, work done, and damages.

HUMPHREYS-DAVIES & Co.

[*** We have received the document referred to, but this correspondence must now cease.—ED.]

GENERAL NEWS.

Professional Announcement.

Mr. Clifford A. Aish, F.S.I., Licentiate R.I.B.A., has removed to 526, Oxford-street, W., and his telephone number is now Mayfair 6661.

The Architectural Association.

The Architectural Association have decided to adopt the cinematograph in connection with lectures on the manufacture and application to actual buildings of building materials. The films are being especially made by Messrs.

Ruffell's Exclusives, Ltd., and they should prove of great interest to all those connected with technical education. The completed films and lectures will be issued by Messrs. Ruffell, Ltd., and arrangements made for showing them to all schools desirous of having them at a reasonable charge; but as a preliminary step the Association are holding a demonstration at No. 18, Tufton-street, S.W., of some of these films. The films will show some of the following trades:—Hand-made brick-making, joinery, stone quarrying and working, and fireproof construction. Further films are in course of preparation.

Exhibition of British Architecture at Paris.

A Joint Committee of the Royal Institute of British Architects and the Architectural Association has been formed to get together a collection of drawings, etc., representative of British architecture, together with students' drawings, for exhibition in Paris early in the month of May next. The proposal to hold the exhibition emanates from the Société des Architectes Diplômés, of Paris, to whose good offices, it will be remembered, the profession in England were indebted for the most interesting exhibition of drawings by students of the Ecole des Beaux-Arts held by the Architectural Association at the Tufton-street Galleries last year. The exhibition now to be held in Paris was originally intended to be composed mainly of English students' drawings, but it was ultimately resolved to include a representative collection of British architectural work, and for this reason the Société des Architectes Diplômés have invited co-operation of the R.I.B.A. The exhibition will comprise three main sections—(1) Historical; (2) Modern Work; (3) Students' Work. Scottish and Irish exhibits will be grouped separately to show their historical and modern development. Modern work of a representative character will be shown, limited to buildings actually carried out. It is understood that the exhibition will be officially opened by the President of the French Republic. The Chairman of the Joint Committee is Mr. Reginald Blomfield, R.A., President R.I.B.A.; and the Hon. Secretary, Mr. P. Cart de Lafontaine.

Paris.

Our Government has received through the French Embassy, and has accepted, an invitation to exhibit a collection in the Pavillon de Marsan, at the Louvre, of British Arts and Crafts, similar to that which was held last year in Ghent. Sir Cecil Smith, Director of the Victoria and Albert Museum, and Mr. Walter Crane, President of the Arts and Crafts Exhibition Society, will act as Chairman and Vice-Chairman of the Advisory Committee upon which they served for the British Arts and Crafts Section at Ghent, and whom the President of the Board of Trade has asked to act for the Paris Exhibition.—M. Hennion, Prefect of Police, has appointed a committee of experts, including foreman stage carpenters, to co-operate with him in framing measures for the better protection of audiences in theatres from fire and panic in existing buildings, and in devising chemical methods of rendering scenery fireproof.—M. Lansdowski's bronze equestrian statue of King Edward was unveiled in the Rue Edouard VII. a few days ago.—M. Bassinet, the contractor, who died last week, was a Senator for the Department of the Seine, and formerly President of the Municipal Council. Beginning life as a destitute orphan child, he, by force of character, raised himself from the comparatively humble capacity of a bricklayer in Paris to high and honourable positions in the service of the State.

The Late George Tinworth.

A monument to the memory of George Tinworth, the sculptor-potter, who died, aged seventy years, on September 10 last year, has been erected in the Cuming Museum of the Southwark Central Library, Walworth-road. The memorial, a gift to the borough by Messrs. Doulton & Co., Ltd., of Lambeth, in whose factories Tinworth worked during more than forty-five years, is a terra-cotta panel by him, entitled "The Jews Making Bricks under Egyptian Taskmasters."

Sir Wm. Q. Orchardson, R.A., Memorial.

The monument in St. Paul's crypt to the late Sir William Q. Orchardson, R.A., which was unveiled last week by Earl Beauchamp, was designed by Mr. W. Reynolds-Stephens, sculptor. The composition embodies an inscribed tablet set in a white alabaster frame carrying an urn and supported by figures of "Napoleon on Board the *Bellerophon*," from the artist's picture in the Tate Gallery, and the "Farmer's Daughter," from his picture that now belongs to the Glasgow Corporation.

New Opera House, Berlin.

The German Emperor has approved of the plans and designs prepared by Herr Hoffmann for the new opera house to be built, at an estimated cost of £1,300,000, upon the site of the old Kroll's Theatre, and opposite the Reichstag. It appears that the expense will be borne by the German Emperor, the City of Berlin, and the Prussian State Treasury.

King Edward Statue, London.

The Advisory Committee of the King Edward Memorial Fund for London, of which Sir Vezey Strong is Chairman, have approved Mr. Bertram Mackennal's model of the bronze equestrian statue which will take the place of that of Field-Marshal Lord Napier of Magdala in Waterloo-place upon the removal of the latter to a vacant pedestal in Trafalgar-square.

Ancient Preston Buildings Demolished.

The Starch-houses, Preston, have been demolished, and the site is to be utilised as an open playground for the children in the neighbourhood and as a drill-ground for the school children of the elementary schools. The space will not be enclosed, but will be paved with flags, and a circle of trees will be planted, leaving an open space about 800 sq. yds. in extent.

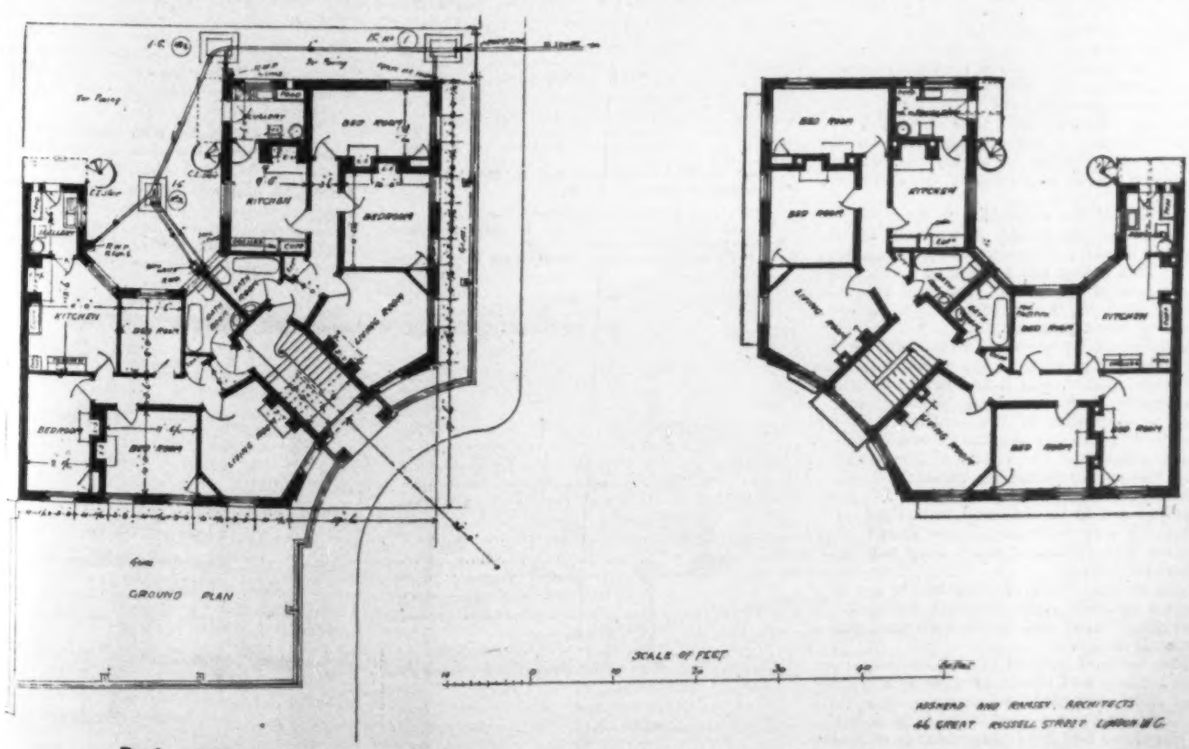
FIFTY YEARS AGO.

FROM an article in the *Builder* of February 20, 1864, on "The New Light":—

Of late, in provincial towns, and even in some villages, gas-lights have been introduced into the dwellings of the working classes—a practice which adds to the cheerfulness of homes and is not more expensive than candles. In Manchester most new houses, of even the third class, have gas-pipes laid on at the time of building. In London this is not so generally done even in new houses of this class; and to lay the pipes to old ones, by reopening the pavements is a seldom recurring art.

Of late, however, lamps constructed for the use of paraffin or petroleum and colza oils are coming much into use in the houses of the working classes; and it is stated that in the longest days of winter, when light is needed from between four and five o'clock p.m. till between ten and eleven, and also in the morning, the cost is only about eightpence a week; common candles would come to about a shilling; while the paraffin gives three or four times the volume of light that could be obtained from candles for that money.

[*** We wonder if with the progress of inventions we shall be discussing a "new light" in fifty years' time.—ED.]



Duchy of Cornwall Estate: Plan of Flats in Upper Kennington-lane at Entrance to Courtenay-street.

Messrs. Adshead & Ramsey, Architects.

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ILLUSTRATIONS.

The Duchy of Cornwall Housing Scheme in Kennington.

A LARGE scheme for the improvement of the Duchy of Cornwall estates in South London is now being carried out, and consists of the gradual replacement of the dilapidated property in Kennington by new blocks of houses, shops, and flats. It is only quite recently that the tenure of the property affected has permitted the carrying out of any extensive rebuilding scheme, and three years ago the Council of the Prince of Wales was for the first time in a position to deal with the remodelling of the Kennington property, Professor Adshead being called in to report on the whole project. Two years ago his recommendations were, with some modifications, acted on, and we illustrate in this issue some of the new work which has been carried out by Messrs. Adshead & Ramsey.

The work consists in part of blocks of flats and houses, some of which we illustrate, and an extensive scheme is in contemplation for the erection of a large quadrangular block containing Homes for Old People, which we hope to give at a later date.

The flats are of low elevations, being generally three floors in height, and whole streets will be built of maisonnettes or self-contained houses superimposed on one another.

The houses generally are planned with living and sitting room, scullery, food cupboard, and three bedrooms, a bath being fitted in the scullery with folding table-top over. The rentals are said to vary from 3s. 6d. to 17s. 6d. a week.

The wish of the authorities is that different classes of people should intermingle on the property to aid a general levelling up of social tone. This policy will prevent the unrelieved aggregation of the poorer classes in the community such as usually marks the decaying stages of urban property.

Kennington possesses many interesting old houses of pleasing design which date from the Adam period, and it has been the aim of the architects in the work we illustrate to keep a suggestion of the continuity of the local tradition in their designs for new buildings. The treatment of the blocks of houses which have flat roofs enables the unsightly parapets between house and house required by the Building Act to be dispensed with, thus giving a breadth and continuity to the design of the smaller type of houses which they would not otherwise possess.

The double block of flats which we illustrate with their angle entrances are, we think, exceedingly good and satisfactory examples of domestic design.

The trellised porches of the smaller houses give interest and charm to what would otherwise be somewhat monotonous masses of building, and are a good example of the value of simplicity and good proportion in utilitarian design. The buildings are carried out in stock bricks, with bands of artificial stone sparingly introduced.

The architectural treatment throughout is, as we think it should be, suggestive of an urban rather than suburban character, but it illustrates how unnecessary it is that the poorer portions of our towns should be deprived of character and distinction in design, and we feel we can congratulate the Duchy of Cornwall in having placed their work in such capable hands. The following are the names of those engaged in the work:—

Flats in Chester-street.

Mr. J. Parsons, contractor, Waterloo-road, S.E. Stone Dressings: The Victoria Stone Company, Bishopsgate, E.C. Ornamental Iron Railings: The Carron Company, Upper Thames-street, E.C. Stoves and Lavatory Fittings: The Albion Iron Company, Upper Thames-street, E.C.

Two Blocks of Flats in Upper Kennington-lane.

Messrs. J. Garrett & Son, contractors, Balham-hill, S.W. Stone Dressings: The Empire Stone Company, Thanet House, Strand. Ornamental Ironwork: The Carron Company. Stoves and Lavatory Fittings: The Albion Iron Company.

Cottages in Square.

Two Blocks of Eight Cottages North and South Sides of Square.

Messrs. T. Hooper & Son, contractors, South Lambeth.

Block of Ten Cottages on West Side.

Mr. G. Brittain, contractor, Kennington-road. Sub-contractors (for all three blocks). Stone Dressings: The Empire Stone Company. Iron Porches and Railings: The Carron Company. Lavatory Fittings and Mantel Registers: The Albion Iron Company. Combination Stoves, Baths, and Coppers: Messrs Cornes & Haighton, Holborn.

Maisonnettes in Cardigan-street.

Mr. J. Parsons, contractor. Stone Dressings: The Empire Stone Company. Iron Porches and Railings: The Carron Company. Lavatory Fittings and Mantel Registers: The Albion Iron Company. Combination Stoves, Baths, and Coppers: Messrs. Cornes & Haighton.

The Church of St. Barnabas, Mitcham, Surrey.

THE church is now in course of erection by Messrs. Allen Fairhead & Son, of Enfield, for the district which is being worked by the City of London School Mission, upon a site in Gorringe Park, Mitcham, upon a part of which a church hall has already been built.

A drawing of the exterior of the church and a short description of the building (of which a plan is now given) was published in the *Builder* on October 18, 1912. The drawing by Mr. Gascoyne of the interior, now reproduced, was shown in the Royal Academy last year. Mr. H. P. Burke Downing, F.R.I.B.A., of Westminster, is the architect.

View of the Great Cascade of Tivoli, with Surrounding Buildings.

WE illustrate another of Piranesi's engravings from "Le Vedute Romane."

MEETINGS.

FRIDAY, FEBRUARY 20.

Institution of Mechanical Engineers.—Mr. Thomas T. Heaton on "Some Modern Methods of Welding." 8 p.m.

Royal Sanitary Institute.—Dr. A. Greenwood on "Infectious Diseases." 7 p.m.

SATURDAY, FEBRUARY 21.

Incorporated Clerks of Works' Association.—Annual dinner, Holborn Restaurant. 6 p.m.

Edinburgh Architectural Association.—Visit to the Usher Hall.

MONDAY, FEBRUARY 23.

Royal Institute of British Architects.—Mr. Paul Waterhouse on "London Railway Stations." 8 p.m.

Royal Academy of Arts.—Sir Charles Waldstein on "Sculpture." 4 p.m.

The Surveyors' Institution.—Annual dinner, at Whitehall Rooms. 7 p.m.

Royal Society of Arts (Cantor Lecture).—Mr. J. Pennell on "Artistic Lithography." 8 p.m.

Royal Sanitary Institute.—Dr. A. Greenwood on "Methods of Disinfection." 7 p.m.

Liverpool Architectural Society.—Paper by Mr. P. Abercrombie entitled "Some Architectural Aspects of Town Planning." 6 p.m.

University of London (Victoria and Albert Museum).—Mr. Banister Fletcher on "Renaissance Architecture." 5 p.m.

TUESDAY, FEBRUARY 24.

Institution of Civil Engineers.—Mr. W. Willox on "Rail-Steels for Electric Railways"; and Mr. S. P. W. D'Alte Sellon on "Rail-Corrugation and its Causes." 8 p.m.

Royal Sanitary Institute.—Mr. Alan E. Munby on "Elementary Science." 7 p.m.

University of London (British Museum).—Mr. Kaines Smith on "Greek Art and National Life." 4.30 p.m.

WEDNESDAY, FEBRUARY 25.

Carpenters' Hall, London-wall (Lectures on Arts Connected with Building).—Mr. F. W. Pomeroy on "A Talk on Sculpture." 7.45 p.m.

Royal Society of Arts.—Mr. T. Brice Phillips on "Rural Housing." 8 p.m.

Royal Sanitary Institute.—Mr. Alan E. Munby on "Elementary Science." 7 p.m.

THURSDAY, FEBRUARY 26.

Architectural Association Camera, Sketch, and Debate Club.—Paper by Mr. D. B. Niven entitled "Some Notes on the London Society and its Doings." 8 p.m.

The Concrete Institute.—Mr. C. W. Cocking on "Calculations and Details for Steel-Frame Buildings from the Draughtsman's Standpoint." 7.30 p.m.

Society of Antiquaries.—8.30 p.m.

Institution of Electrical Engineers.—Mr. F. Lydall on "Motor and Control Equipments for Electric Locomotives." 8 p.m.

Royal Academy of Arts.—Sir Charles Waldstein on "Sculpture." 4 p.m.

University of London (British Museum).—Mr. Banister Fletcher on "Ancient Architecture." 4.30 p.m.

University of London (Victoria and Albert Museum).—Mr. Kaines Smith on "The Nature of Beauty." 3.30 p.m.

FRIDAY, FEBRUARY 27.

Institution of Civil Engineers.—Mr. C. S. Meik on "The Use of Reinforced Concrete in Connection with Dock and other Maritime Work." 8 p.m.

Architectural Craftsmen's Society, Glasgow.—Mr. Jas. S. Boyd on "Mediæval Architecture of St. Andrews." 7.45 p.m.

Leicester and Leicestershire Society of Architects.—Mr. C. E. Mallows on "Hampton Court Palace." 8 p.m.

COMPETITION NEWS.

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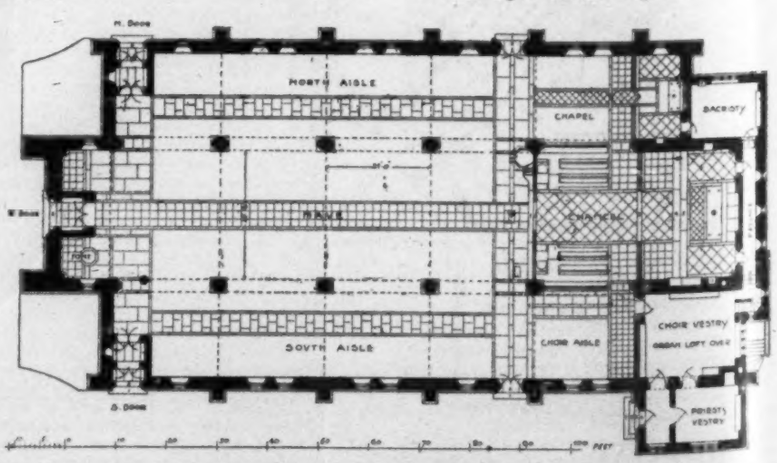
The list of current Competitions is printed on page 227.

Theatre, Torquay.

As the result of the limited competition, the designs of Messrs. Richardson & Gill, F.R.I.B.A., have been accepted for the building of the structure. We are informed that the scheme will be on academic lines, and will embrace several new features in the working of the stage. The work will be carried out conjointly by Messrs. Richardson & Gill and Mr. F. G. Moore, of Torquay.

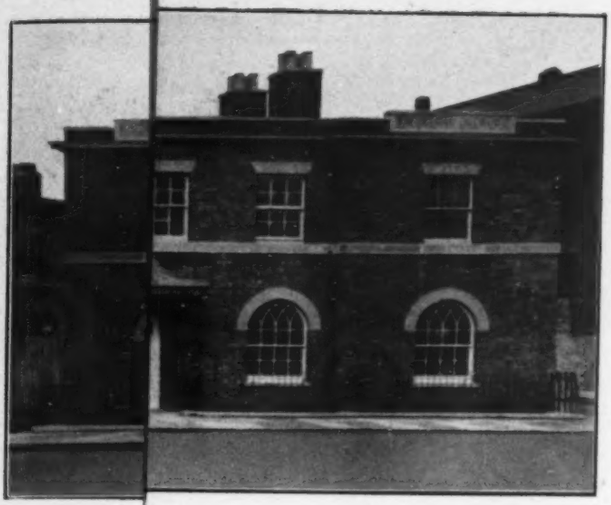
Barnsley Town Hall Competition.

Members of the Society of Architects are further notified that the amendments of the conditions proposed by the promoters are not sufficient to justify the Society withdrawing its disapproval. Members are referred to Clause 4 of the Society's Code of Ethics, and are requested not to take part in this competition.

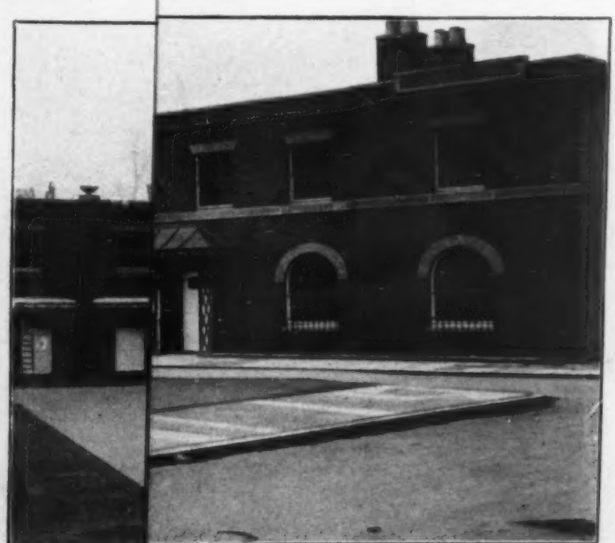


St. Barnabas Church, Mitcham, Surrey.

Mr. H. P. Burke Downing, F.R.I.B.A., Architect.



DETAIL OF ENTRANCE TO COURTENAY-STREET.



CHITECTS.

MONDAY, FEBRUARY 23.

Royal Institute of British Architects.—Mr. Paul Waterhouse on "London Railway Stations." 8 p.m.

Royal Academy of Arts.—Sir Charles Waldstein on "Sculpture." 4 p.m.

The Surveyors' Institution.—Annual dinner, at Whitehall Rooms. 7 p.m.

Royal Society of Arts (Cantor Lecture).—Mr. J. Pennell on "Artistic Lithography." 8 p.m.

Royal Sanitary Institute.—Dr. A. Greenwood on "Methods of Disinfection." 7 p.m.

Liverpool Architectural Society.—Paper by Mr. P. Abercrombie entitled "Some Architectural Aspects of Town Planning." 6 p.m.

University of London (Victoria and Albert Museum).—Mr. Banister Fletcher on "Renaissance Architecture." 5 p.m.

TUESDAY, FEBRUARY 24.

Institution of Civil Engineers.—Mr. W. Willox on "Rail-Steels for Electric Railways"; and Mr. S. P. W. D'Alte Sellon on "Rail-Corrugation and its Causes." 8 p.m.

Royal Sanitary Institute.—Mr. Alan E. Munby on "Elementary Science." 7 p.m.

University of London (British Museum).—Mr. Kaines Smith on "Greek Art and National Life." 4.30 p.m.

WEDNESDAY, FEBRUARY 25.

Carpenters' Hall, London-wall (Lectures on Arts Connected with Building).—Mr. F. W. Pomeroy on "A Talk on Sculpture." 7.45 p.m.

Royal Society of Arts.—Mr. T. Brice Phillips on "Rural Housing." 8 p.m.

Royal Sanitary Institute.—Mr. Alan E. Munby on "Elementary Science." 7 p.m.

THURSDAY, FEBRUARY 26.

Architectural Association Camera, Sketch, and Debate Club.—Paper by Mr. D. B. Niven entitled "Some Notes on the London Society and its Doings." 8 p.m.

The Concrete Institute.—Mr. C. W. Cocking on "Calculations and Details for Steel-Frame Buildings from the Draughtsman's Standpoint." 7.30 p.m.

Society of Antiquaries.—8.30 p.m.

Institution of Electrical Engineers.—Mr. F. Lydall on "Motor and Control Equipments for Electric Locomotives." 8 p.m.

Royal Academy of Arts.—Sir Charles Waldstein on "Sculpture." 4 p.m.

University of London (British Museum).—Mr. Banister Fletcher on "Ancient Architecture." 4.30 p.m.

University of London (Victoria and Albert Museum).—Mr. Kaines Smith on "The Nature of Beauty." 3.30 p.m.

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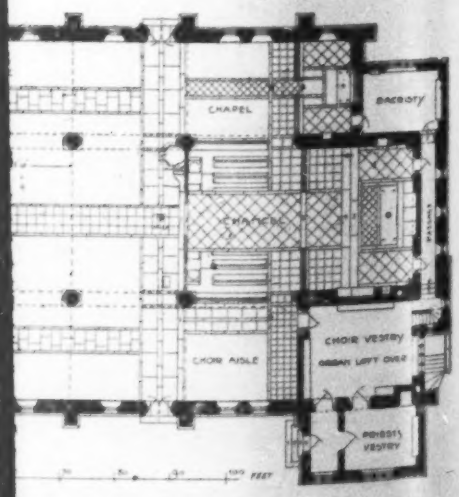

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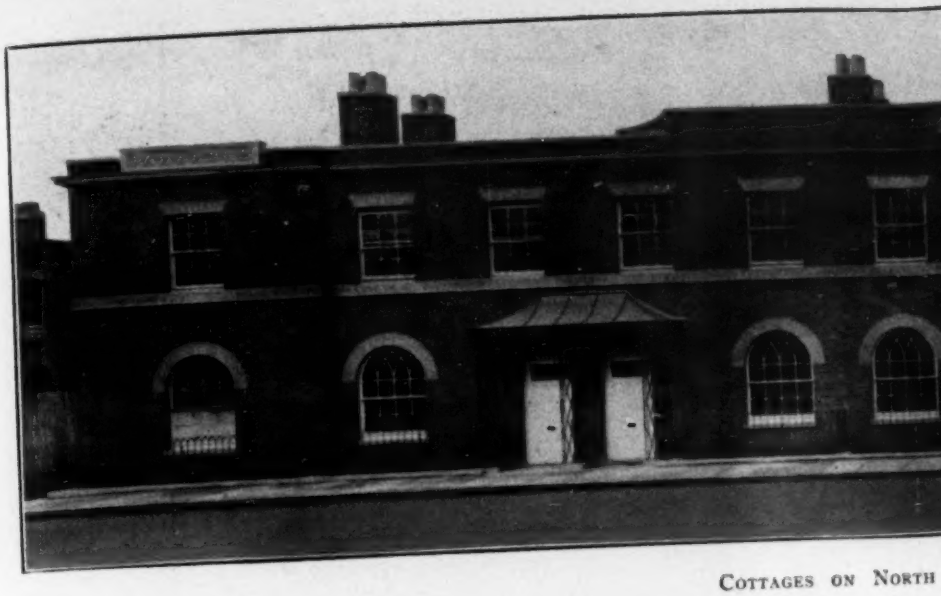


COTTAGES ON NORTH

DETAIL OF TWO-STORY FLATS IN CARDIGAN-STREET.

COTTAGES ON THE NORTH

REBUILDING: DUCHY OF CORNWALL

S ON NORTH SIDE OF NEW SQUARE OFF COURTENAY-STREET.

FLATS IN UPPER KENNINGTON-LANE AT ENTRANCE TO COURTENAY-STREET.

ORTH AND WEST SIDES OF NEW SQUARE OFF COURTENAY-STREET.

VALL ESTATE, KENNINGTON, S.E.—MESSRS. ADSHEAD & RAMSEY, ARCHITECTS.

Block of Flats in Chester-street, S.E.

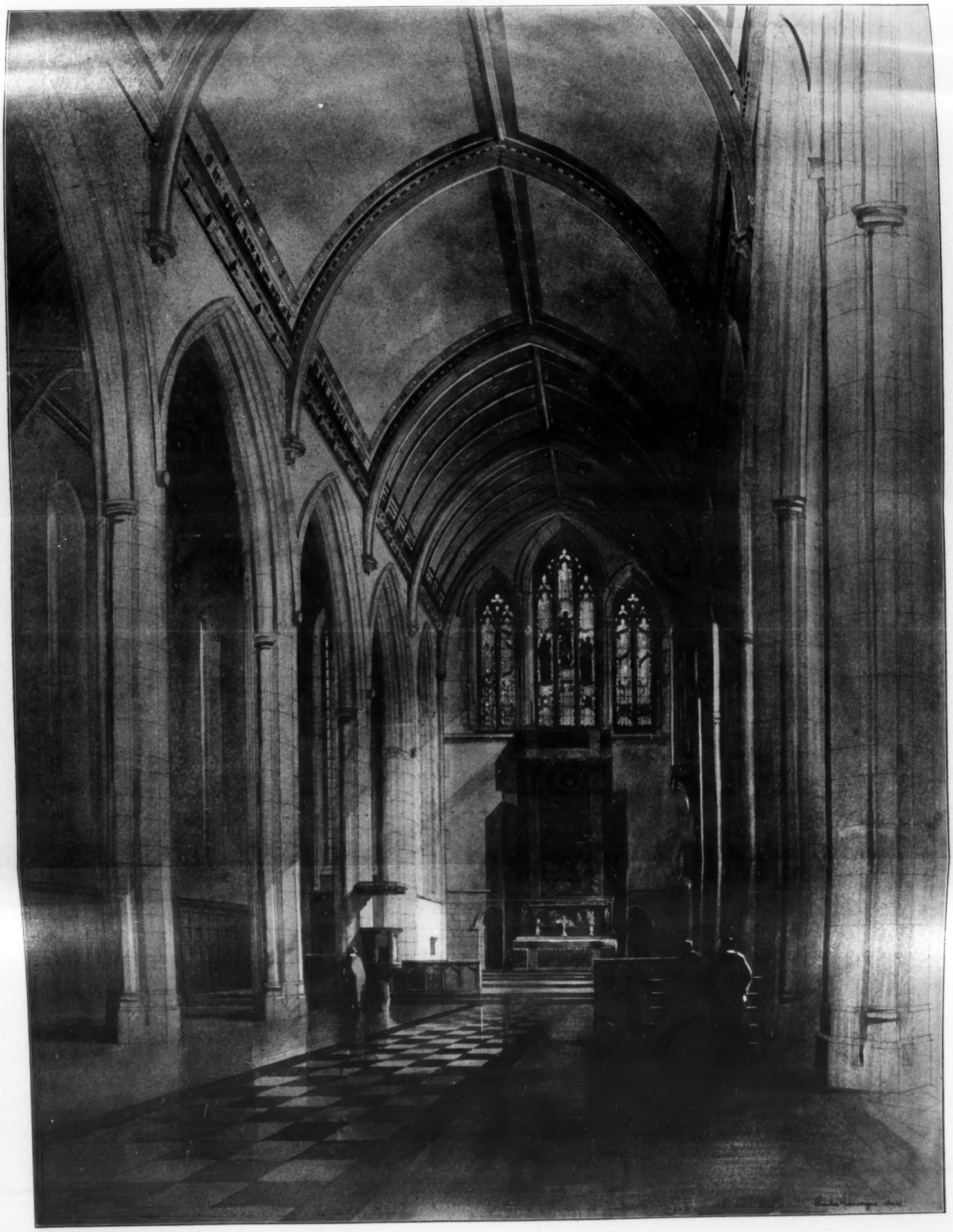
REBUILDING, DUCHY OF CORNWALL ESTATE, KENNINGTON, S.E. [illegible]

DETAIL OF FLATS IN UPPER KENNINGTON-LANE AT THE ENTRANCE TO COURTENAY-STREET.

REBUILDING: DUCHY OF CORNWALL ESTATE, KENNINGTON, S.E.—MESSRS. ADSHEAD & RAMSEY, ARCHITECTS.

VIEW OF THE GREAT CASCADE OF TIVOLI, WITH SURROUNDING BUILDINGS.

(From Piranesi's "Le Vedute Romane.")



Martin, Hood & Larkin, Gt. Newport St., London, W.C.

S. BARNABAS CHURCH, MITCHAM, SURREY: INTERIOR.—Mr. H. P. Burke Downing, F.R.I.B.A., Architect.

LEGAL SECTION.

NOTES OF CASES.

PORTER *v.* TOTTENHAM URBAN DISTRICT COUNCIL: DELAY IN DELIVERY OF SITE.

THE case of Porter *v.* Tottenham Urban District Council (30 T.L.R. 251; 1914 W.N. 24), which was decided last month, is of considerable interest. The plaintiff entered into a contract to erect certain buildings for the defendants on a site belonging to them known as Downhills Park, and it was provided that the plaintiff should be at liberty to enter on the site immediately for the purpose of carrying out the works. The only approach to the site was by means of a road made under the following circumstances. R., the owner of land adjoining Downhills Park, had laid out his property as a building estate. A strip of land immediately adjoining Downhills Park was laid out as a road, connecting up two public highways. Houses had been built on the site of the road opposite the Park, and the road had been made up on that side but not on the other; the road had been used as a public thoroughfare for three years or thereabouts. The defendants made a gap in their fence adjoining the said road on the unmade-up side, and thus gave the plaintiff access to the site as agreed. About a fortnight after the plaintiff had commenced work, he was threatened by R. with an action for trespassing on the unmetalled portion of the road, which R. alleged was not subject to any right of way, and on a strip of land varying from 1 in. to 3 in. in width, and immediately adjoining Downhills Park, which R. alleged he had reserved to himself. The plaintiff gave R. an undertaking and ceased work. The defendants thereupon brought an action against R., and obtained an injunction restraining him from interfering with access to their land. Thereupon the plaintiff recommenced work, and subsequently brought this action, claiming damages for the defendants' delay in giving possession of the site. In giving judgment for the defendants, Mr. Justice Ridley said: "But in this particular case the facts present this peculiarity, that the reason of the delay, of the failure to perform their obligation, was the interference of a third person, who was a mere trespasser, over whom the building owners had no control, and with whose acts they could not have dealt otherwise than they did. If the obligation were held to apply in such a state of things it would be difficult to define any limit to the liability of the building owner. The obligation to give prompt possession is based on the builder's contract to complete the work in a given time, subject or not to penalties. In the absence of such a provision the obligation would be otherwise, and it would be for the building owner to give possession and for the builder to complete in a reasonable time. Therefore the liability put on the building owner has relation to the contract. There is no reason to be deduced from the position of the parties to the agreement why one of them rather than the other should be held to take on himself responsibility in the event of accidents which renders its performance impossible."

It is, however, important to distinguish between the above case, where the delay was owing to the wrongful act of a third party, and those cases where the delay is caused by actual default on the part of the building owner. Thus, for instance, in the case of Freeman *v.* Hensler ("Hudson on Building Contracts," Vol. II., 323) the plaintiff contracted to pull down fifteen old buildings on a site belonging to the defendants and to erect thereon twelve new buildings. Owing to difficulties in obtaining possession of the old buildings from the occupiers, the defendants were unable to give the plaintiff possession of the whole site at one time, five months having elapsed before the plaintiffs obtained possession of the last portion. By agreement the commencement of the works and the date of completion were postponed for a fortnight.

Lord Justice A. L. Smith, in giving judgment in favour of the builder, said: "I quite agree that implications are not to be brought into written contracts, unless it is necessary that they should be brought in in order to carry out the obvious intentions of the parties to the contract. That is good sense and good law, and it has been laid down many times. But where the building owner contracts with the builder to pay him £4,400 to build twelve houses, the builder must have the right to enter and to take possession of the land on which he is to erect these twelve houses. There must be something implied. The whole contract says nothing about the time when the builder is to come in, and it is perfectly obvious and necessary to imply something, otherwise he could not build the houses at all."

His lordship then proceeded to examine the wording of the contract with a view of ascertaining what actually was implied, and pointed out the following material terms: "That the contractor was upon signing the contract to insure the whole of the buildings against loss or damage by fire. The contractor was to complete the whole of the work except painting, and such other work as the architect might desire to remain over, within six months of the date of the contract, unless the work should be delayed by reason of inclement weather or causes not under the contractor's control . . . for which due allowance should be made by the architect, and that in case of default the contractor was to pay as and by way of liquidated damages an agreed sum of £10 a week."

His lordship then proceeded as follows: "I am not touching on penalties, because that has nothing to do with the case. But there is an indication that the contractor is to insure from the date of the contract. The next thing is that, excepting exceptions, he is to complete the buildings within six months. If he does not complete within six months he is to pay £10 a week, and this is an important feature of the case. When is he to have the land to start building upon? There must be something implied in the contract as to the time when the land is to be given over to the builder. Then there is another clause which is of some importance. There is a question about bricklaying, and when one reads the clause about the bricklaying, in my judgment, this bricklaying applies to the whole twelve houses which the contractor had undertaken to build. Now what are the words? 'The bricklaying is to be carried up simultaneously all round; no portion to be more than 5 ft. in advance of any other at any time.' How could that be done if the builder had not got possession of the land? He could not perform that part of the contract. Therefore it seems to me perfectly clear on reading this contract that there is an implication in it that the building owner shall give the builder the site on which the builder is to erect twelve houses, and, in my opinion, the implication is that the site should be delivered over within a reasonable time. . . . Now it is perfectly obvious that the building owner did not hand over the site within a reasonable time or anything like it. In fact this delay has driven what is called a summer contract into a winter contract, which, it is well known, is more expensive to the builder than a summer contract."

And Lord Justice Collins said: "There are certain provisions in the contract which point to the express agreement that the building shall be conducted as far as possible simultaneously over the whole of a given area, therefore it was essential to the contractor that the whole site should be handed over, and it seems to me, no date being expressed, but a limit of six months being fixed, and time being of the essence of the contract, that possession should have been handed over forthwith. However, the contractor appears to have waived his right of not getting possession within the first fortnight. That takes out of the contract the covenant that time is of the essence of the contract, and substitutes a reasonable time for the earlier obligation which, I think, existed to hand over possession at once. I think we are now the judges of what is a reasonable time within which the contractor would be entitled to insist on the site being handed over. I should say that the reasonable time cannot be extended beyond the fortnight during which the contractor was willing to acquiesce in not getting possession of the land. The reasonable time, in my judgment, ends at the expiration of that fortnight. I think the damage ought to be assessed on the footing that there was a breach in not handing over possession at that date."

A comparison of these two cases shows very clearly that Porter *v.* the Tottenham Urban District Council does not exonerate the building owner from default on his own part in delay in giving possession, but only applies where delay arises from causes beyond the building owner's control.

Conditions as to Delay.

In connection with this subject, conditions as to delay are also of interest. Where the contract contains provisions providing that the contractor shall not be entitled to any increased payment in consequence of delay in delivery of the site, such provisions will not be enforced if "the conditions of the contract are so completely changed as to make the special provisions inapplicable." Thus in the case of Bush *v.* Whitehaven Trustees ("Hudson on Building Contracts," Vol. II., 118) the plaintiff contracted with the defendants to construct water mains for a fixed sum. The conditions provided *inter alia* that the contractor should not enter upon any portion of the site or commence any works thereon without the engineer's authority, and that the contractor should be given the use of so much of the site as the engineer should from time to time consider necessary, "but the non-delivery in the manner aforesaid of the use of such site, or any part thereof, shall not vitiate or affect the contract . . . nor entitle the contractor to any increased allowance in respect of money, time or otherwise, unless the engineer may grant him any extension of time, and then only . . . without thereby prejudicing, or in any way affecting the validity, or the sufficiency of the tender, or the adequacy of the same, or the prices therein mentioned." It was also stipulated that the work should be completed within four months from the date of the engineer's order, which was to date from the middle of July. The site was not all available until October 6. Owing to the delay the work was thrown into the winter months, and consequently extra expense was incurred. The jury found that the contract was entered into on the basis that the defendants would be in a position to give the plaintiff from time to time the use of so much of the site as should be necessary to enable him to continue the execution of the works; that at the commencement of the contract the defendants were not in a position so to do; that the conditions of the contract were so completely changed, in consequence of the defendants' inability to hand over the sites of the work as required, as to make the special provisions in the contract inapplicable, and assessed the damages at £600 over and above the contract price. The defendants appealed, and the verdict was upheld. Lord Chief Justice Coleridge said: "It was turned into a winter contract . . . when many most important circumstances under which the contract was to be executed had wholly changed from those which, it is reasonable to suppose, were in the contemplation of both the parties when the contract was entered into. The contract nevertheless was carried on and was completed. It was carried on and was completed, of course, with the knowledge of the contractor, and equally, of course, with the knowledge of the defendants. The defendants knew as well as the contractor that the work was being carried on under totally different circumstances to those contemplated in the contract. They knew that perfectly well, and, although the plaintiff possibly or probably might at the expiration of four months have thrown the contract up and refused to proceed, he also had a perfect right, with the knowledge and assent of the defendants, which in this case is to be presumed, and indeed was proved to go on with the contract and to complete it under the altered conditions, or I will not say to complete the contract, but to complete the work under totally altered conditions that had arisen."

METROPOLITAN WATER BOARD *v.* JOHNSON & CO.

In this case the plaintiffs entered into an agreement with the Secretary of State for War to supply water to Hounslow Barracks for domestic and non-domestic purposes, the supply to be by meter and at the rates and charges specified in the agreement. During

the currency of this agreement the defendants contracted with the Secretary of State for War to carry out certain building operations at Hounslow Barracks, it being agreed by the War Office that the defendants should obtain water for the works free of charge from the barracks. Sect. 16 of the Metropolitan Water Board (Charges) Act, 1907, provides that the Board shall, at the request of any owner or occupier of any premises situate in any street in which any main or service pipe of the Board is laid, who requires a supply of water for services other than domestic, afford a supply of water by means of a meter or other fit and sufficient instrument or apparatus. Sect. 17 of the same Act provides that "any builder being about to erect any building, who shall require a supply of water for that purpose, shall be deemed to be the occupier of premises within the meaning and for the purposes of sect. 16, provided that if the Board so determine they may, instead of affording the required supply by measure, afford the same at a rate not exceeding 7s. per £100 of the total cost after making such allowance as the Board may think reasonable for decorative or iron or steel work not requiring the use of water." The plaintiffs had passed a resolution to the effect that water for building purposes should be supplied at the rate of 7s. per £100 of the probable total cost, less such amount in respect of decorative work, etc., as the Board's Appeal and Assessment Committee should think fit. During the course of the works the Supervisor of the Metropolitan Water Board wrote to the defendants as follows:—

"*Re* Nurses' Quarters, Hounslow Barracks. I am informed that you are using the Board's water for building purposes at the above site, and I shall be obliged if you will fill in and return the enclosed form of application for a building supply in order that an account may be prepared and sent to you for payment."

The defendants declined to fill in the form, and accordingly the plaintiffs brought an action in the County Court to recover 14s., being the amount of their charge calculated at the rate of 7s. per £100 of the probable total cost of the building. There was no evidence that any question of allowance for decorative work, etc., was considered in the case of this particular building. The County Court Judge gave judgment against the defendants, who appealed to the Divisional Court, and from there to the Court of Appeal, where the appeal was allowed and the judgment reversed. In the course of his judgment Lord Justice Vaughan Williams said: "The first point which was raised in the County Court upon sect. 17 was whether the plaintiffs could by a general resolution "determine" within the meaning of the proviso so as to make their determination of general application. The County Court Judge held that the plaintiffs could do so, and the learned judges in the Divisional Court agreed with him upon this point, though Channell, J., expressed some doubt about it. In my opinion, the decision upon that point is wrong. The contention of the Water Board is that they were entitled to pass a general resolution that they would always charge the maximum sum. I do not think they had any right to do that. In my judgment, they are bound on each occasion to examine the matters that require examination, and to form their own conclusion as to how much, if any, of the work is decorative or iron or steel work not requiring the use of water, and to make a proper deduction in respect thereof from the total cost.

With regard to the meaning of the word "require" in sect. 17 of the Act, Channell, J., in his judgment says: "I think that the defendants are not persons who 'require a supply of water' within the meaning of those words in sect. 17 of the Act in question, and unless they are the action is clearly not maintainable. I entirely agree with that." He goes on: "Those words, in my opinion, mean persons who desire to be supplied with water by the Board; in other words, persons who desire to become customers of the Board for their water. . . . No persons are obliged to take the Company's water by the Company's Act. It seems to me that what the Water Board are doing in this case is to assert that they are entitled to compel persons who do not ask or wish for a contract with the Water Board for a supply of water to take a supply . . . I entirely agree that no persons are obliged to take the Company's water by the Company's Act. It is an option, and, in my opinion, sect. 17 merely gives to a builder who is about to erect a building power to make an application under sect. 16 for a supply of water for the building operations as if he were the occupier of premises, and it imposes upon him no obligation to take water for the building operations." And Lord Justice Buckley said: "In sect. 16 it seems to me to be clear that the word 'requires' does not mean 'has occasion for,' but means 'asks for,' 'demands,' or 'requests.' . . . The word 'require' in sect. 17, to my mind, has the same meaning as in sect. 16."

LEGAL CORRESPONDENCE COLUMN.

Note.—Answers to inquiries in this column are furnished gratuitously, and strictly on the understanding that no legal liability or responsibility of any kind is accepted or incurred thereby. Correspondents who desire to make use of this column, while supplying their names and addresses in full to the Editor, should also give a nom de plume under which the inquiry can be answered.

BRICKS.—The quantity surveyor is clearly liable for negligence on the facts stated.

X. Y.—The builder, on the construction of the agreement, would be liable to the building owner for the damage.

BUILDING AGREEMENT.—The landlord's power of re-entry appears to have been properly exercised, but the builder can obtain relief by an application to the Court.

PARTY FENCE.—The first question is whether it is in fact a party fence. If so, the liability is joint. But if it is not a party fence, the question is, on whose land is the fence erected? This would be primarily determined by a reference to the deeds. There is no liability at common law to repair a fence, but the owner (*i.e.* of the land on which it stands) is liable for damage resulting to his neighbour from its non-repair.

LAW REPORT.

Important Principle to Timber Merchants.

IN the Bow County Court, before his Honour Judge Smyly, K.C., a case was tried on Monday last week in which Counsel said that, although the amount was very trivial, the principle involved was of the greatest importance to them and to timber merchants. The plaintiffs were Messrs. Burt, Boulton, & Hayward, timber merchants, of No. 64, Cannon-street, E.C., and they sued Messrs. R. Woollaston & Co., of No. 46, Turner's-road, Burdett-road, Limehouse, builders, to recover £16 0s. 8d. for timber supplied.

Mr. A. R. Jackson appeared for the plaintiffs, and Mr. Werninck as Counsel for the defence.

In opening his case for the plaintiffs, Mr. Jackson said that in June the defendants ordered a quantity of timber from the plaintiffs, and also another lot on July 1. There was now no dispute that the timber was delivered, and as a fact the amount of the account had been paid into court, less 2½ per cent. discount, and it was as to that upon which the case rested. The terms upon which the parties were doing business were 2½ per cent. in two months; but he wished to call particular attention to a printed statement at the top of the order, which said:—"This account is payable at the above address only." This was the first case of its kind he had ever heard of, said Mr. Jackson, where it was insisted that payment should be asked for at the place where the order was given. As a matter of fact, the plaintiffs did not observe it at the top of the order, or they would have refused the terms, and if everyone insisted that accounts should be payable at the place of order it would mean every firm doubling their staff. It was most unusual and unreasonable. The defendant was allowed more than his two months' credit as a rule; that was to say, that any timber ordered at any time in any month would not become due until two months from the 31st. Goods in June amounted to £12 10s. 6d., and it was not until October 3 that the sum was asked for peremptorily, it being suggested that several invoices had been sent in. This was denied by letter, in which the plaintiffs' attention was drawn to the statement at the top of the invoice, and asking them to send a representative down, and a cheque would be ready for them. Although they did not consider the request reasonable, they decided to defer to their wishes, and wrote saying a representative would call in two days. The representative did call, but the defendant was not there; it was not known when he was coming in, and no cheque had been left. The representative refused to wait, and on getting back to the office wrote threatening proceedings, failing immediate settlement. It was not until October 22, however, that the cheque came to hand, less 2½ per cent. discount.

Mr. Werninck: That is all you were claiming, then?

Continuing, Mr. Jackson said that when the representative called he also asked for the £3 10s. 2d. for the timber supplied in July—in fact, a settlement in full, and at that time the defendants had forfeited their right to a discount. When the cheque arrived it was returned with a refusal to allow the 2½ per cent., and proceedings were commenced. The defendants replied that they had expected the plaintiffs' representative to call again. Since that time the money had been paid into court less the 2½ per cent. In conclusion, Mr. Jackson said that 8s. 3d. only was involved, but the principle underlying it was of the greatest importance to the plaintiffs and timber merchants.

Mr. William Thomas, traveller for the plaintiffs, said he did all the business with the defendants, and he confirmed the story told by the solicitor.

The defendant gave evidence, and said that on the day the cheque was applied for he arrived at eleven o'clock, having been detained in a conference with surveyors.

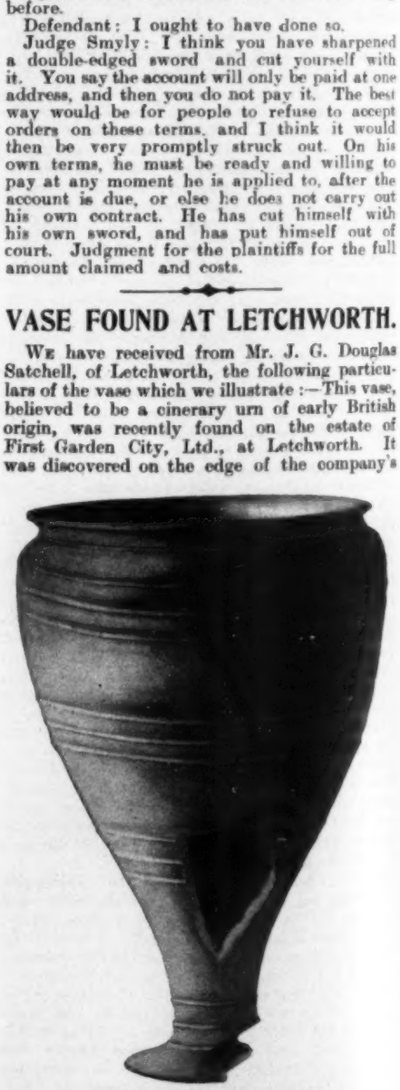
Judge Smyly: He is strictly entitled to nothing more than a call at his place, and the cheque should have been written out the day before.

Defendant: I ought to have done so.

Judge Smyly: I think you have sharpened a double-edged sword and cut yourself with it. You say the account will only be paid at one address, and then you do not pay it. The best way would be for people to refuse to accept orders on these terms, and I think it would then be very promptly struck out. On his own terms, he must be ready and willing to pay at any moment he is applied to, after the account is due, or else he does not carry out his own contract. He has cut himself with his own sword, and has put himself out of court. Judgment for the plaintiffs for the full amount claimed and costs.

VASE FOUND AT LETCHWORTH.

WE have received from Mr. J. G. Douglas Satchell, of Letchworth, the following particulars of the vase which we illustrate:—This vase, believed to be a cinerary urn of early British origin, was recently found on the estate of First Garden City, Ltd., at Letchworth. It was discovered on the edge of the company's gravel pit, in the neighbourhood of which several bones, arrowheads, and other relics have been unearthed.



Vase found at Letchworth.

Some small portions of a substance which appears to be charred bone and a metal buckle, probably bronze, were in the urn.

When found by the workmen it was fortunately partially uncovered, owing to a heavy rain having fallen during the previous night. The height of the vase is 15 in. and the greatest width 8½ in.

THE BUILDING TRADE.

THE DISPUTE IN LONDON.

THE negotiations for a conference begun by Mr. C. W. Bowerman, M.P., have been carried on during the week. Both sides appear to be willing to confer, but cannot agree upon a satisfactory basis.

The various unions representing the workmen concerned in this dispute are confederated into a larger body calling itself the London Building Industries Federation, and the suggestion is that this Federation shall be the negotiating body at the conference.

This proposal does not suit the Employers' Association because, in the first place, the agreements, the breaking of which caused the dispute, have always hitherto been made between the Employers' Association and each union of each branch trade, as is the custom generally throughout the country.

In the second place, the Federation of the workmen has not yet shown itself deserving of the confidence of the employers. It is a new body, formed apparently mainly for the purpose of focusing the activities of those who are exploiting so energetically the popular movement known in this connection as labour unrest; its chief title to notice is the systematic way in which it has engineered sympathetic strikes, every one of which involved some at least of its members in breaches of agreements which they were bound in honour to observe. Although not a party to the working rule agreements, this Federation is mainly responsible for their denunciation, and has shown scant consideration for the natural compunctions of those numerous members of the unions which in the past have shown, by their actions, that they took a pride in loyally fulfilling every obligation they undertook.

In the third place, there is no evidence that the Federation is, or can be, or will be, put into a position to enforce discipline among the individual unions of which it is composed any better than the unions have been able to enforce it upon their individual members.

Now this question of discipline is the question at issue between the employers and the unions; without it agreements are so much waste-paper, and employers are not taking any more unless and until they are reassured that the internal discipline of the unions will be sufficient to secure faithful performance of the engagements entered into and of adequate punishment of individual members who disregard such engagements.

Nevertheless, it must not be inferred that employers' organisations have any objection to negotiating with responsible confederations of the various branch trades, being themselves fully sensible of the practical advantages of a unified set of agreements affecting all the branch trades alike; they would rather have notices for changes in working agreements from all branches at once and all settled at once, since there is less upset of trade in that way. If a dispute evolves into a strike or lock-out they would prefer to have the whole trade shut down rather than have it semi-paralysed by partial cessations of work.

It is evident, then, that what is needed now to bring about a conference is not the surrender by the operatives of their organisation for united action, but that the component unions should accredit it in such a way that the other side may feel satisfied that the Federation is really the proper body to negotiate with. This might very well prove to be the case if the constitution of the Federation is on sound lines. Every body of this kind is formed to secure objects greatly desired by its members, to help them, to benefit them. Loss of those advantages follows expulsion from it and, as we showed last week in the case of an individual member of a trade union, loss of benefit carries with it a substantial financial penalty.

In any large body, such as a federation, it is difficult for a unit to initiate any change of policy or rules, because it is an insignificant and disregarded minority until it can secure enough support to become a majority or nearly so. Agreements with such bodies, therefore, tend to be more stable than agreements with its units. Then the opinion of the majority of a federation, being in effect the public opinion of the trades composing it, has a restraining effect upon rebelliously-inclined units, which should tend to prevent breaches of agreements entered into by the federation. On the other hand, such bodies, when animated by a whole-hearted conviction as to a certain course of action, are very much more powerful than their units, because any large body of united opinion is in itself imposing. Federations therefore tend to be slow-moving bodies, rather conservative and difficult to start, but very difficult to stop when animated by a strong feeling. Examples of this on a great scale may be found in the history of the United States of America, as well as in what is taking place there at the present moment. There, too, may be found examples of how single units sometimes flout obligations entered into by the federation and insult those with which it has agreements, but always in the end the public opinion of the federalised states prevails. What is wanted in the present case is that the Building Industries Federation shall be able to satisfy the Employers' Association that there is a clear chain of individual and collective responsibility, extending from every individual member of every individual union up to and through the Federation, to the agreement to which the latter puts its signature on their behalf, and that the powers of discipline possessed by the executive of the Federation are such that it can reach and suitably penalise any individual who, disregarding his responsibility, breaks away from the agreement.

The Federation and its constituent unions have the right solution of the case in their own hands; it is mainly a question of internal organisation and showing the other side that the negotiating body is worthy of confidence.

THE DEARTH OF APPRENTICES.

SPEAKERS at public functions are apt to say, in speaking of the training of young people for the building and other trades, that the apprenticeship system is dead. This may be true of certain places, such as London, but it cannot be true of the North of England, where it is reported that a trade committee of an important employers' county federation recommends that apprentices' wages should be considerably increased, starting at least at 8s. and rising to 25s. per week during the apprenticeship; and, lest this should not prove sufficiently strong inducement to secure what is so urgently needed, it is further recommended that youths should not be bound before the age of seventeen years, and then start at 10s. per week.

Evidently the apprentice system is far from dead where employers are offering such inducements. It looks as though an awakening was at hand in this matter. For a long time employers have seemed supine; statistics have been showered upon them warning them of the scarcity that was coming, and now has arrived, but they have remained indifferent until now.

However, the incident mentioned above is a sign which is welcome, the more so as the proposal to raise the age for beginning apprenticeship to seventeen years points a way out of other difficulties by providing a way to a career for youngsters who have entered the so-called blind-alley occupations, such as errand boys, van boys, messengers, shop boys, office boys, and the like.

It is chiefly because in the years from fourteen to seventeen the earnings of youths engaged in such occupations exceed those of youths undergoing apprenticeship that the former are preferred. Under a system of apprenticeship, which requires a boy to begin at fourteen and makes sixteen the latest age at which he may be bound to the various branches of the building trade, the boys who are engaged in blind-alley occupations are excluded.

It looks as if those philanthropic and educational associations which devote much care and thought to this question of training the young might now consider the practicability of a scheme on the lines of allowing boys, under proper restrictions, to earn money, from the time they leave school until they reach sixteen to seventeen years, in any of the so-called blind-alley occupations they choose, and then providing a way of escape into a skilled trade, by way of apprenticeship, at a wage which will be a real inducement for them to quit the blind alley for the more open road. It would seem that a way might be found out of the many difficulties, especially financial ones, which have so long barred the way to real progress in the training of young people for industrial pursuits.

WAGES IN THE BUILDING TRADE.

BURY.—An advance in wages of ¾d. per hour (9d. to 9¾d.) has been granted to the masons as and from June 1 next.

GLOSSOP.—The painters in this district are asking for an increase in wages of 1½d. per hour (8d. to 9½d.).

LIVERPOOL.—An advance in wages of ½d. per hour (10d. to 10½d.) has been granted to the plumbers in this district as and from February 1, with a further ½d. advance on August 1 next.

LONDON.—Strong efforts are being made by the Parliamentary Committee of the Trade Union Congress to bring about a Conference between employers and men concerned in the building trade dispute. A meeting of the Parliamentary Committee and of representatives of the building trade unions took place on Friday last, at the House of Commons, to discuss the question of opening negotiations with a view to a conference. The meeting lasted several hours, and at its conclusion Mr. C. W. Bowerman, M.P., stated that "after a full and free discussion of the position the Conference agreed to request the Parliamentary Committee to continue its endeavours to bring about a conference between employers and the men's representatives." The employers are willing to meet the men in conference, but still refuse to meet the London Building Industries Federation. This was made clear in an interview with Mr. Lawrence, when he said:—"We have always been willing to meet the trade unions in the building trade with a view to bringing about peace, but we want to meet the representatives of the unions—bricklayers', plumbers', and so on—with whom we have always done business, and not some new Industries Federation, as it is called, of whose standing, backing, and right to represent a big body of men we know nothing." An important development took place on Monday last, when it was announced that the Transport Workers' Federation had decided to give the London Building Industries Federation every assistance possible in their struggle by refusing to handle all materials by land and water destined for jobs in the London district where there was a dispute. In a statement issued on Tuesday night Mr. Stennett, President of the London Building Industries Federation, declared that a full meeting of the whole of the Executive Committee had been convened for Wednesday to consider whether all men in the employ of the Works Department of the Office of Works who are members of the unions connected with the building industry shall be withdrawn. Mr. Stennett said that a very serious position had arisen in regard to the understanding arrived at as to the attitude of the Department towards the dispute. It was arranged that all men employed by a large Government contractor were to be taken into the employ of the Office of Works and paid by that Department until a settlement had been arrived at. The men now allege that workmen in the Government service are being sent to finish jobs contracted for by this large master builder. Furthermore, that all men applying for Government work are being asked to sign the agreement which led to the declaration of the dispute. At the conclusion of the meeting on Wednesday it was announced that Mr. Bowerman had arranged a basis for a conference with the London Master Builders' Association which the men had accepted, the question of the recognition of the London Building Industries Federation being waived, also that the trouble which had threatened to cause the withdrawal of the men employed by the Office of Works had been settled satisfactorily as a result of a deputation to the First Commissioner of Works.

NOTTINGHAM.—At the annual meeting of the Nottingham Building Trades' Conciliation Board the application of the Amalgamated

Society of Carpenters and Joiners for alterations of the working rules was dealt with, the Local Trade Committee having failed to reach an agreement. The request was for an advance of wages from 9½d. to 10½d. per hour and the withdrawal of the last clause in the walking-time rule, which reads:—"This rule does not apply to men set on at a job." Witnesses were heard from both parties, but the Board was unable to come to a decision, and the appeal now goes forward to the Midland Centre Conciliation Board.

THE LONDON MASTER BUILDERS' ASSOCIATION:

ANNUAL DINNER.

THE annual dinner of the London Master Builders' Association was held on Wednesday in the Whitehall Rooms, Hôtel Métropole, W.C., Mr. Walter Lawrence, jun., President, in the chair, supported by

Mr. Basil E. Peto, M.P., Sir Herbert H. Bartlett, Bart. (Past-President), Mr. James S. Holliday (Past-President), Mr. Percy B. Tubbs (President, Society of Architects), Mr. William Woodward, Mr. Frederick Higgs (Past-President, National Federation), Mr. E. B. Barnard (Chairman, Metropolitan Water Board), Mr. Benjamin I. Greenwood (Past-President), Mr. W. Curtis Green (President, Architectural Association), Mr William Shepherd (Past-President), Mr. T. J. Carless (President, Quantity Surveyors' Association), Mr. F. Shingleton (President, Builders' Benevolent Association), Mr. J. S. Gibson (Vice-President, R.I.B.A.), Mr. J. Carmichael (Past-President), Mr. E. Guy Dawber (Vice-President, Royal Institute of British Architects), Mr. Ernest J. Brown (President, Institute of Builders), Mr. Stephen Bird (Master, Tylers and Bricklayers' Company), Mr. H. P. Burke Downing, Mr. Ralph J. Holliday, Mr. H. P. Shepherd, Mr. S. J. Dicksee, Mr. Theodore Godlee, Mr. Ian Macalister (Secretary, R.I.B.A.), Mr. F. Millar (Secretary, Employers' Parliamentary Council), Mr. A. W. Turnbull, Mr. G. Bird Godson (Past-President), Mr. W. Hammond, Mr. W. J. Renshaw, Mr. W. F. Wallis, Mr. W. Downs, Mr. F. J. Walton, Mr. G. H. Parker, Mr. F. Thorne, Mr. Howell J. Williams, Mr. J. E. Whiter, Mr. J. W. Chessum, Mr. R. B. Chessum, Mr. S. B. Depree (Secretary), Mr. Walter Wood, Mr. F. J. Gayer, Mr. G. J. Newman, Mr. H. J. Porter, Mr. Lewis Peters, Mr. E. D. Pratt, Mr. J. C. Bourne, Mr. R. M. Roe, Mr. G. R. Julian, Mr. W. Frowde Young, Mr. H. A. Armytage Gate, Mr. H. P. G. Maule, Mr. A. W. S. Cross, Mr. H. J. Johnson, Mr. T. F. Waggett, Mr. W. Lee Clarke, Mr. A. W. Lewis, Mr. H. T. G. Chidgey, Mr. E. C. Pinks, Mr. A. H. Ryan Tenison, Mr. F. A. Powell, Mr. W. C. Waymouth, Mr. J. M. Theobald, Mr. J. C. S. Mummery, Mr. G. E. Withers, Mr. T. Costigan, Mr. R. W. Fryer, Mr. A. Pelly, Mr. W. H. Duffield, Mr. A. Cox, and others.

The loyal toasts having been suitably proposed by the President and honoured,

Sir H. H. Bartlett, Bart., proposed the toast of "The Houses of Parliament," coupled with the name of Mr. Basil E. Peto, M.P. In the course of his remarks he referred to the excellent work of the President and to the connection of Mr. Peto with the building trade. He did not quite know what the Houses of Parliament had to do with builders and contractors. Parliament had tried an experiment on the building trade in regard to unemployment, which was a tax on the trade, as though it did not suffer enough as it was. If that experiment succeeded, and he doubted whether it would, it would be applied to other trades. If it did not, it would mean that the building trade had a tax put upon it as an experiment. He hoped that Parliament would do away or amend the Trades Disputes Act, which was one of the most iniquitous Acts ever passed, placing as it did a class of people in this country above the common law. This was not good for anybody. He expressed the hope that the Trade Disputes Act would be so amended or done away with as to restore a fair, reasonable, and proper arrangement between employers of labour and the employed.

Mr. Basil E. Peto, M.P., in reply, said that the building trade had had little for its money lately. But Parliament had only the previous day been considering a question of vital importance to the building trade, *i.e.*, the effect of the Budget of 1909–10 on the provision of houses of the smaller kind for the working classes. He and those who thought with him contended that there had been an extraordinary diminution in the supply of these houses since the Budget was passed. The Chancellor of the Exchequer said that the high price of money and materials had been felt by the speculative builder, who depended on the supply of cash at a low rate if he was to carry on his enterprise, but he never mentioned the fact that building labour was dearer and dearer. He did not mean that in connection with the various trades affected the hourly rate of wages had been advanced from time to time. This, if builders had an adequate return, no one would grumble at, but he did complain that there was a smaller and smaller return in labour for the money expended. People engaged in every class of building were finding out that it cost them more and more year by year to carry out the same amount of work that they carried out heretofore. The price of materials went up and down, money was dear and cheap, but labour was becoming less and less efficient, dearer and dearer year by year, by reason of the vicious system which was corrupting the whole labouring classes of this country, who were led to believe that the interests of capital and labour were opposed. Until they could do something to alter this fundamental error, until capital and labour could co-operate in a common cause, they would find strikes occurring again and again. He was perfectly certain that no enterprise could go on, least of all any building enterprise, where people were not prepared to abide by contracts in which they had entered themselves or through their trade organisations. As he understood it, the whole of the present dispute had to do with the point as to whether there should be any guarantee for the certainty of a contract. In this dispute they were fighting not against the interests of labour, but for the interests of labour, because if the contention of the other side were to succeed the employment of labour would have the greatest blow directed against it that could possibly be directed against its interests.

Mr. Henry Holloway, J.P., then proposed the toast of "The Architects and Surveyors," coupled with the names of Mr. J. S. Gibson and Mr. T. J. Carless, President of the Quantity Surveyors' Association. In the course of his remarks he congratulated the President on the success of that gathering and especially referred to the services of the President during his year of office. Those who had been privileged to work with him during his year felt that they could not do too much to honour him for the services he had rendered to the building trade. As to the architects, he expressed his great admiration for the work they did, and especially referred to the improvement in the architecture of the country. He wished, however, there was a closer touch between the builder and the architect so that they could understand and enter into each other's feelings in regard to their work. It used to be so, but he was afraid it was not so now, with the younger men especially, and builders now got their instructions from the clerk of works; but he thought they ought to revive the good old feelings which existed in the earlier days of personal friendship between architects and builders. Builders had their difficulties, for they were squeezed on the one hand by the specialist, who deprived them of the control of their jobs, and on the other they were threatened with the loss of control of labour in their business. With regard to the struggle they were passing through, it was not merely a question whether they were going to allow a man to work on their job whether he was a trade unionist or not. The fact of the matter was the Socialists and Syndicalists were determined, if possible, to control all the industrial enterprises of this country. That was a dangerous principle. The Syndicalists were out to destroy the power of capital, to control enterprise, and the step which Syndicalists were taking was only the first step. The point particularly before them at the present time was a proposition that every employer should sign an agreement to the effect that no one should work on his job unless he was a member of a trade union. The second step would be that the unions would ask to be allowed to regulate the engaging and dismissing of the men, and in the end they would be asked to give up absolute control of their business. The Syndicalists claimed to be allowed to regulate the output of the men engaged. It behoved them to look at this question seriously, and to stand firm to resist the movement which was coming on at the present time. That Association was not in for smashing the unions, but they did resist the suggestion that the trade unions should control the management and the organisation of their businesses.

Mr. J. S. Gibson, in replying for the architects, said that much good could accrue from the closer intercourse of builders and architects. As to the Institute of Architects, it was on excellent terms with all reputable builders because they knew that they could rely on the integrity with which builders would carry out any agreements entered into with them. Until they could instil into the minds of labour the same idea, *i.e.*, that agreements must be kept, they could not expect to carry on their business. The Institute had its duties to perform, and there was great advantage in belonging to it. One of its objects was the advancement of good building and good design, and, to enable this to be done, they were very much interested in the proper training of young men and teaching them what underlies good architecture. They had their little troubles, and they thought they ought to have more control over those who did not uphold the reputable conduct of the profession; but they had come to the conclusion that they would be able to obtain such powers under their Charter as would enable them to carry out, to the fullest extent, those duties and obligations which it was incumbent on them to do, and he hoped that the quality of architecture would go on improving. He agreed with much that Mr. Peto had said as to housing, but there was more than the statistical side of the question. He was against any attempt at standardisation of cottages for any person—against the setting up of standard rooms, standard cost, and a standard of design. It was the province of the Government to find out what was necessary from the point of view of the nation, to find out where the demand was for cottages, but it was not the business of the Government to set up any standard of value of design, and to plant down in the Cotswolds, or in Sussex, Kent, or Scotland, or anywhere else stereotyped cottages which might be livable as far as ordinary persons were concerned, but which would be outside the environment in which they were placed. Whatever those cottages might cost, there was the bigger question behind of the value to the nation of preserving the beauty of England and Scotland. The cottages and villages we knew had grown up, and the best and finest and most picturesque of them never, he was certain, had an architect to design them, but they were well built and they were a great national asset. People came from all over the world to see these charming villages and cottages, and nothing was more undesirable than that the Government should set up any standard which would destroy the picturesqueness of the countryside.

Mr. T. J. Carless also replied, for the surveyors, and referred to several questions affecting quantity surveyors, especially standardisation or improvement of measurement. Too rigid a standard, he agreed, was a bar to progress. As to the dispute in the building trade, he expressed the opinion that the men had no case, and that the sooner they came to terms the better.

Mr. William Woodward then proposed the toast of "The London Master Builders' Association," and in the course of his remarks he referred to rural housing and the model by-laws issued by the Local Government Board, which, he said, gave architects and builders a lot of unnecessary trouble. He had had the words counted and he found the number was 21,578, and he went through the by-laws in order to see if he could simplify them, while leaving all the practical and necessary directions on the same lines as in the Local Government by-laws, and he had succeeded in doing it in 2,198 words. How could they expect builders to build good and inexpensive cottages if they were hampered by ridiculous requirements? Architects were intimately concerned in the relations between that Association and their men, and he did not know any body better qualified to discuss the question than the R.I.B.A., and if the Master Builders' Association were to ask the Institute, and if the men's representatives did the same, there would be no difficulty in arranging a conference with the idea of ending an unfortunate dispute, and he was sure the Institute would be pleased to assist in this way. The R.I.B.A. were, at present, engaged with the Institute of Builders in considering a new set of conditions of contract which would prevent the disputes as to sub-contractors. In conclusion, Mr. Woodward referred to the labours of Mr. Lawrence during the present dispute, and made special reference to his tact, patience, and ability in carrying on delicate negotiations and in other ways. In his (the speaker's) opinion it would be impossible to arrive at a proper solution of the present labour difficulties unless they got rid of the labour leaders. Not 50 per cent. of the men were on strike of their

own free will. They did not know why they were striking; they did not wish to strike, and would be the very first to resume work if allowed to do so—and he hoped the day would come when the labour leaders would be treated in precisely the same manner as they had been treated in South Africa.

The President, who was received with musical honours, said, in reply, that the masters were by no means downhearted. During his year of office 121 meetings of the Council had been held against fifty-three in the preceding year and thirty-eight in the year before that, so it would be realised how their labours had increased. Speaking for himself, he could not have got through as well as he had had it not been for the great support of all the members of Council and also the officials of the Association. Trade had been better in the industry, and would have been better still but for the unfortunate dispute, but as to that he thought a large number of the men did not know what they were out for and what the dispute was about. He was glad to say that so far there had been no bitterness shown during the dispute, and he hoped there would not be. The history of the trouble was well known to them, and he need not repeat it. The employers charged the men with breaking their agreements, and no reasonable reply had been made to that. There was no doubt that the spirit of Larkinism had invaded London, and it was not against the trade unions as they had hitherto known them, but against Larkinism, that they strongly protested, and against that they intended to fight to the bitter end. Misrepresentation of the masters' position had been made in certain quarters. The men had in some cases been invited to believe that the much-discussed 20s. penalty agreement was the firm basis of any negotiations the masters might enter into with the men, but that was never the intention of the masters; it was only an intermediary step, and as soon as collective bargaining was again resorted to, and as soon as the unions were ready to meet the masters with financial guarantees that the agreements would be carried out, the 20s. agreements would be waste paper. The men did not understand this, and this fact had gone a long way to prevent the men signing the agreement. The unions claimed that the men were not signing the agreement, but one had only to look at the jobs in progress to see. Last week no fewer than 1,000 of the agreements were signed. The masters did not want to reduce the wages of the men or take away the advances recently given. What the masters objected to was meeting the National Building Trade Industries Federation as suggested by the other side. The masters had at the present time eleven agreements with different trade unions, and now they were asked to meet a body representing twenty unions, some of which had little or nothing to do with the building trade at all, such as the National Amalgamated Furniture Trades Association. The cause of the trouble was that they had asked the unions for a financial guarantee because the ordinary agreements had failed in the past. The masters wished to deal with the responsible unions which had funds, in some cases running into six figures, and not with a body such as the National Building Industries Federation. The masters appealed to architects and surveyors to help them at the present time by getting building owners to allow their works to stand still for a time, while they finished the fight and brought it to a successful issue. The men had made a national appeal for funds; it would not be necessary for the masters to do the same, but it was for them to consider whether they should make a national appeal to the building federations throughout the country to fall into line and help, but before that was done possibly something would happen which would make the position clearer. He had had another meeting with Mr. Bowerman, M.P., and at the next meeting of the Council they might have a written invitation to a conference. If the men were willing to put forward some reasonable guarantee that would be binding upon them with regard to future contracts it might lead to a speedy settlement of the dispute.

The concluding toast was "The Visitors," proposed by Mr. W. F. Wallis, J.P., coupled with the name of Mr. E. B. Barnard, J.P., Chairman of the Metropolitan Water Board. Builders had had, said Mr. Wallis, great complaint against the Board but they were more satisfied now in view of the recent decisions arrived at.

APPLICATIONS UNDER LONDON BUILDING ACTS, 1894 to 1909.

THE Building Acts Committee of the London County Council have consented to the following applications under the London Building Acts, 1894 to 1909:—

Lines of Frontage and Projections.

Hampstead.—Erection of balconies at the rear of Nos. 21 and 23, Iverson-road, Hampstead, at the ground, first, and second floor levels, as shown on the plan submitted with the application of Mr. A. Puleston on behalf of the Great Central Railway Company.

Hampstead.—Erection of a motor-house at the rear of No. 113, King Henry's-road, Hampstead, next to Merton-road, as shown on the plan submitted with the application of Mr. S. C. Lathbridge on behalf of Mr. W. Littlewood.

Marylebone, East.—Erection of an angle bay-window, columns, pilasters, and a cornice at Nos. 68 and 69, Castle-street East, St. Marylebone, as shown on the plan submitted with the application of Mr. J. Slater on behalf of Messrs. Misener.

St. George, Hanover-square.—Erection of a projecting balcony at No. 45, Green-street, W., as shown on the plans submitted with the application of Mr. F. W. Foster on behalf of Dr. Baines.

Width of Way.

Chelsea.—Re-erection of Nos. 14 and 15, Riley-street, Chelsea, as shown on the plan submitted with the application of Mr. H. D. Pearson on behalf of Mr. F. J. C. Ganzoni.

City of London.—Erection of buildings abutting upon St. James-court, Bury-street, City, at less than the prescribed distance from the centre of the roadway of the street, as shown on the plan submitted with the application of Mr. T. H. Smith.

Line of Frontage and Space at Rear.

Wandsworth.—Erection of an addition at the rear of No. 149, Balham-hill, Balham, next to Dinsmore-road, as shown on the plan, dated December 20, 1913, submitted with the application of Mr. E. J. George on behalf of Mr. A. G. Jenkins.

Space at Rear.

Marylebone, East.—Erection of an hotel building, over Baker-street Railway-station, to abut upon Marylebone-road, Upper Baker-street and Allsop-place, St. Marylebone, as shown on the plans submitted in connection with the application of Mr. F. J. Wills on behalf of the Metropolitan Railway Company.

St. Pancras, North.—Deviation from the plans approved on July 4, 1911, for the erection of buildings abutting upon Kentish Town-road and Prince of Wales-road, St. Pancras, so far as relates to the alterations shown on the plan submitted with the application of Mr. S. H. Burdwood.

Cubical Extent.

Kensington, North.—Deviation from the plans approved on November 19, 1912, under sect. 17 of the London County Council (General Powers) Act, 1908, for the erection at the premises of the Pall Mall Depository Company, Ltd., Barlby-road, Kensington, of a furniture depository, to exceed 250,000 cubic ft. in extent, so far as relates to the erection of an addition, as shown on the plans submitted with the application of Mr. W. G. Hunt.

PROPOSED NEW BUILDINGS AND OTHER WORKS.*

IN these lists care is taken to ensure the accuracy of the information given, but it may occasionally happen that, owing to building owners taking the responsibility of commencing work before plans are finally approved by the local authorities, "proposed" works, at the time of publication, have been actually commenced. Abbreviations:—T.C. for Town Council; U.D.C. for Urban District Council; R.D.C. for Rural District Council; E.C. for Education Committee; L.G.B. for Local Government Board; B.G. for Board of Guardians; L.C.C. for London County Council; B.C. for Borough Council; and P.C. for Parish Council.

ABERDEEN.—The Harbour Board have decided to proceed with the wharfing of a section of the north bank of the River Dee, at an estimated cost of £90,800.

Aldershot.—Plans passed:—Lock-up shops, Gordon-road, for the Home Counties Public House Trust, Ltd.; alterations to premises, Aldershot Market, for Messrs. Park & Sparkhall; house, Church-hill, for Mr. S. Harrison; additions to workshop, 112, Victoria-road, for Mr. W. L. Hunt; cart shed, Cambridge-road, for Mr. W. B. Fawn; additions to cottage at pumping-station, Boxall's-lane, for the Aldershot Gas, Water, and District Lighting Company.

Alnwick.—The B.G. have decided to purchase land from the Duke of Northumberland for the erection of children's homes.

Ardrossan.—On a poll a majority of the ratepayers are in favour of the scheme of the T.C. to construct a bathing pond on the foreshore, and to provide an installation of hot sea-water and fresh-water baths.

Ashton-under-Lyne.—The T.C. have decided to apply to the L.G.B. for sanction to borrow £13,000 for sewerage works. Plans passed:—Messrs. Elias Wild & Sons, extension of offices, Katherine-street; Dr. Mann, additions to house, Katherine-street; and Messrs. J. Briggs, Ltd., conversion of one lock-up shop into two shops in the Old Square.

Atherstone.—Plans passed by the R.D.C.:—Four cottages in Nixon-lane, Grendon, for Mr. Nixon; coachhouse for Mr. C. Atherton Brown; dairy buildings for Mr. C. Atherton Brown; residence on Baxterley Common for the Baddesley Colliery Trustees; two houses in Dordon-road, Polesworth, for Mr. T. Cliffe.

Belford.—Plans submitted by Mr. J. Davidson for semi-detached villas near St. Aidan's Sea Houses, for Mr. H. Chatton and Mr. A. Brown, have been approved by the R.D.C.

Bexhill.—A Committee of the T.C. is to consider the question of the erection of public baths, washhouses, and conveniences in the north of the town.

Biggleswade.—The R.D.C. have adopted plans for six cottages fronting the Great North-road, and for eight cottages fronting the Baulk-road, all of the parlour type; and as regards the St. Neots-road property have decided that five cottages be placed on the main road and eight cottages fronting Mr. Hall's property on the north.

Billericay.—The B.G. have approved of the plans of Mr. H. R. Bird, architect, for remodelling the Workhouse and Infirmary, and they will be sent to the L.G.B. for approval.

Blandford.—The late Mr. J. T. Barnes has bequeathed £2,500 to the T.C. for a recreation ground, and £1,000 for rebuilding of the church almshouses; and on the death of his wife £9,000 for the erection of twenty-five villas for distressed farmers, £9,000 to build cottages for the necessitous poor of the town, and £3,000 for a swimming bath.

Blean.—A L.G.B. inquiry has been held into the application by the R.D.C. for sanction to borrow £580 for works of sewage for the parish of Herne.

Blyth.—In view of the great increase in shipping business on the River Blyth the Harbour Commissioners have decided to dispense with the present ferry service between Blyth and Cambois and erect a steel girder bridge at an approximate cost of £50,000. The Blyth and Bedlington Urban Councils are to be asked to co-operate in the project by constructing suitable approaches.

Bodmin.—The Borough Surveyor is to prepare detailed plans and estimate for a fire-station.

Bolton.—Plans passed:—Messrs. Ormrod, Pomeroy, & Foy, for new Sunday-school in St. George's-road, between the Spinners' Hall and the Congregational church; Mr. Briscoe, a shelter at the Bolton Infirmary; Messrs. J. Marsden & Co., store-room at Burnden Bleachworks; Mr. Percy Southern, taxi garage in Blackburn-road; Swan-lane Spinning Company, new mill in Swan-lane.

Bradford.—The T.C. have decided to purchase the site and premises of the Royal Infirmary for £100,000, with which sum the Hospital Board propose to erect a new building. A scheme by the Water Committee for duplicating pipes from Nidd Valley to Chellow Heights has been approved. The scheme, which involves an estimated expenditure of £180,000, is for the doubling of the line of pipes over a length of 14 miles.

Bristol.—The T.C. are to reconstruct the roadway at the back of Bathurst shed leading from Wapping to the Junction Lock, Bathurst Basin with granite setts on a concrete foundation, at a cost of £1,280.

Bromley.—Plans passed:—Mr. M. Zimmermann, alterations and additions, Bromley and Bickley Golf Club House, Magpie Hall-lane; Messrs. E. & S. Smith, redrainage of Nos. 1, 2, and 3, Sharp's-cottages, Walter's-yard; Mr. C. H. B. Quennell, motor-house, Wythe's House, St. George's-road; Mr. H. R. Latter, new house, Oaklands-road.

Burton-on-Trent.—The T.C. have sanctioned electricity works extensions at a cost of £6,000, and decided to carry out the water-carriage sewerage system in regard to over 100 houses, without cost to the owners of the property.

Camborne.—Plans passed by U.D.C.:—Addition to Messrs. Daniell & Thomas's offices, Chapel-street; four-roomed house at Pengegon for Mr. J. Williams; two five-roomed houses at Troon for Mr. P. James; twelve five-roomed houses at North Roskear for Mr. A. Bennett; two-roomed house at Park-road for Mr. J. Rodda.

Chatham.—Plans passed by T.C.:—Continuation of existing warehouse towards the Paddock at the rear of 35, Railway-street, for Mr. H. J. Dorey; additions and alterations to the National Electric Theatre, High-street; thirteen houses at Ewart-road, for Mr. H. A. Phillips; lock-up shop and stores, Otway-street, for Mr. W. A. Snelling; bungalow at King Edward-road, for Mr. R. Hopkin; house, Chestnut-avenue, for Mrs. L. Finnegan; new business premises in Fair-row for Mr. D. P. Allison.

Chelmsford.—An L.G.B. inquiry has been held into the application of the Essex C.C. to borrow £6,000 for the purchase of property as a site for new county offices.

Croydon.—Plans approved:—Messrs. Maides & Harper, nine houses, Albert-road; Mr. A. W. Dadson, one house, Lower Addiscombe-road; Mr. H. Elliott, six houses, Pollard's-hill South; Messrs. Heath & Rhodes, mission hall, corner of

* See also our list of Competitions, Contracts, etc., on page 237.

RATES OF WAGES IN THE BUILDING TRADE.

THE following are the present rates of wages in the Building Trade in the principal towns of England and Wales. It must be understood that, while every endeavour is made to ensure accuracy, we cannot be responsible for errors that *may* occur:—

——	Masons.	Bricklayers.	Carpenters, Joiners.	Plasterers.	Slaters.	Plumbers.	Painters.	Masons' Labourers.	Bricklayers' Labourers.	Plasterers' Labourers.
	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
Newcastle	10	10	10	10	9½	10	9	6½	6½	6½
Sunderland	10	10	10	9½	9½	9	9	6½	6½	6½
Darlington	9	9½	9	9½	9½	9	7½	6½	6½	6½
Stockton-on-Tees	9	10	9½	10	9½	9	8½	7	7	7½
Bradford	10	10	9	9	9½	10	8½	6½	6½	6½
Halifax	9½	9	8½	8½	8½	9	8½	6½	6½	6½
Hull	9½	9½	9½	9½	9½	9½	8½	7	7	7
Leeds	10	10	9½	9½	9	9½	8	7	7	7
Sheffield	10	9½	9½	9½	9½	9½	8½	6½	6½	6½
York	9	9½	8½	9½	9½	8½	7½	6½	6½	6½
London	11½	11½	11½	11½	—	1s.	9	7½	7½	7½
Brighton	8-9	8	8	—	—	—	—	—	—	—
Portsmouth	9	9	9	9	—	8	7½	6½	6½	6½
Southampton	8½	9½	9½	8	—	9½	8½	6½	6½	6½
Maidstone	9½	9½	9½	9½	9	9½	7½	6	6	6
Bristol	9½	9½	9½	9½	—	9½	9	6½	6½	6½
Plymouth	9	9	9	9	—	9	7½	6	6	6
Bath	7½	7½	8	8	7½	7½	7	5-5½	5-5½	5-5½
Cheltenham	8½	8½	8½	8½	—	8½	7½	5½	5½	5½
Exeter	8	8	7½	7½	7½	7½	6½	5	5	5
Gloucester	7½	8½	8½	7½	7½	8½	7½	5½	5½	5½
Hereford	7½	8	7½	8	7½	7	6½	5	5	5
Stroud	7½	7½	7½	7½	7½	7½	7	5	5	5
Blackburn	10	10	9½	9	9½	9½	—	6½	7	7
Bolton	10	10½	10	10½	9	10	9	—	—	—
Liverpool	11	11	11	10	10	10½	9½	6½	6½	6½
Manchester	10	10½	10½	11	9	10	9½	6½	6½	7½
Oldham	10	10½	10	9½	9	10	9½	6	7	7½
Preston	9½	10	9½	9	8½	9	8½	5½	6	6
Birmingham	10	10	10	10½	9	10½	9	7	7	7
Derby	9½	9½	9	9	9	9	8	6	6	6½
Leicester	9½	9½	9½	10½	9	9½	8	7	7	7½
Nottingham	10	9½	9½	10	9	9½	9	7	7	7½
Norwich	8	8	8	8	8	8	6½	5	5	5
Cambridge	9	8½	8½	9	8	9	7	5½	5½	5½
Oxford	9	8	8½	8½	8	8½	7	6	6	6
Southend	9	9	9	9	Piece-work	9	7	6	6	6
St. Albans	9	9	9	10	8½	9	8	6	6	6
Grays	—	10	10	—	—	—	8½	7	7	7
Cardiff	9½	9½	9½	9½	9½	9½	8½	6½	6½	6½
Swansea	9	9	9	9	8½	9	8½	6	6	6
Newport	9	9	9	9	8½	8½	8½	6	6	6
Chatham	8	9	8½	9	9	8½	7	5½	5½	5½
Birkenhead	11	11	11	10½	10	10	9½	6½	6½	6½

The mason's rate given is for bankers; fixers usually ½d. per hour extra.

Livingstone and Moffat roads; Mr. P. Richardson, one house and shop, Lower Addiscombe-road; Mr. H. M. Wakley, cinematograph hall, London-road, Norbury; Messrs. G. Poulton & Son, four houses, Spa-hill. The L.G.B. have sanctioned the borrowing by the T.C. of £96,000 for waterworks, and have also held an inquiry into the application by the Corporation for sanction to borrow £2,830 for the provision of motor fire appliances, £1,550 for the purchase of land adjoining Grange Park-road as a site for public baths, £3,600 for the construction of an outfall sewer across Waddon Marsh, and £14,500 for sewage works at the South Norwood Farm.

Droylsden.—Plans approved by U.D.C.:—For new church (St. Andrew), Edge-lane, submitted by Mr. P. Walker, architect; and also plan of factory chimney at pickle works, Lees-street, for Mr. W. Harrison.

Dunfermline.—The T.C. have received a report of Messrs. Crouch, Hogg, & Easton, of Glasgow, and will proceed with a water scheme, estimated to cost £82,000.

Durham.—Mr. C. Groves, of Chester-le-Street, is making preparations for the commencement of a garden city scheme in the South-road direction. "Elvet Moor Garden City" will be begun shortly in a 5½ acre field just off the South-road, which leads from Bow Cemetery to Lowe's Farm. Villa or semi-detached villa residences are proposed to be erected.

Elham.—Plans passed by R.D.C.:—Extensions and alterations to Cherry Garden Farm, Elham, including two new cottages and garage, for Mr. C. Hobson; cottage at Cylinder-hill, Saltwood, for Mr. E. Longley; house and shop, Elham, for Mr. C. Major; garage, stable, and entrance lodges and drainage plans for Sir P. Sassoon's mansion at Lympne.

Foleshill.—Plans passed by R.D.C.:—Six houses at Booth's Fields, Foleshill, for Messrs. Jones & Mason; three houses, Grange-road, Foleshill, for Mr. E. K. Purnell; two houses, Binley-road, Stoke, for Mr. D. L. Williams; one house Newton-road, Bedworth, for Mr. A. Orton; rebuilding of Cricketers' Arms, Collycroft, Bedworth, for Messrs. T. Salt & Co., Ltd.; addition to house and motor-house, Mount Pleasant, Bedworth, for Mr. G. H. Pickering; brick shed, Longford-road, Foleshill, for Mr. J. Rogers.

Frinton.—Plans passed by U.D.C.:—Shop in Connaught-avenue for Mr. A. H. Mummery; and a house in Fourth-avenue for Mr. J. F. Walker.

Gillingham.—The South-Eastern and Chatham Railway Company are spending about £50,000 in railway works at Gillingham, where considerable extensions are contemplated.

Glasgow.—Warrants granted by the Dean of Guild Court:—Messrs. John Weston & Co., timber merchants, 54, Gordon-street, to construct offices, workshop, and store at 107, Kelvinhaugh-street; North British Railway Company, to erect offices at Camlachie Goods Station; Kingston Bowling Club, to add to their club buildings in M'Culloch-street; Messrs. Barr & Stroud, Ltd., Caxton-street, to add to their premises there; Messrs. Symington & Co., cork manufacturers, 372, Scotland-street, and 54, Great Clyde-street, to erect buildings at the latter place.

Glastonbury.—Plans for two houses in Benedict-street for Mr. Merrick; and of conversion of a workshop in Norbins-lane into a dwelling-house for Mr. H. Hawkins have been passed.

Grimsby.—The B.G. have adopted plans for improvements and extensions at Monkhouse, which will cost £11,000.

Halesworth.—The U.D.C. have decided to purchase an acre of land on which to erect workmen's dwellings, for which Mr. A. Pells, Beccles, will be the architect.

Halifax.—The members of the Ebenezer Church are raising a fund of £5,000 to erect a new church.

Haxby.—Funds are being raised for a village hall, for which plans have been prepared.

Hessle.—The L.G.B. have held an inquiry into the U.D.C.'s application to borrow £1,200 for the erection of working-class dwellings, and for the appropriation of land belonging to the Council near the recreation ground as a site for that purpose.

Hinderwell.—Plans from the East Cleveland Co-operative Society for business premises and for the erection of six houses approved.

Hitchin.—The R.D.C. have decided to go on with the erection of an isolation hospital, at a cost, roughly, of £10,000. Mr. Adams is the architect.

Jarrow.—Plans have been passed for a drill-hall at the corner of Beech and Fir streets.

Kettering.—Mr. C. Wickstead, J.P., has bought 43 acres of land, which he has named the Pebbleford Estate and intends to develop on garden suburb lines.

Knutsford.—Cracks have been discovered in the walls and ceiling of the parish church, and the parishioners have decided to repair these and, if funds permit, to extend the church. The approximate cost is £2,500.

Largs.—The T.C. have plans before them of proposed new offices of the G. and S.W. Railway Company at Largs Pier.

Linthwaite.—Plans passed by U.D.C.:—Two houses near Storth for Messrs. Winpenny & Heppenstall; house at Kaye-lane for Mr. J. W. Thorp; conversion of a house into two cottages at Highhouse for Mr. William Cock.

Liverpool.—The Mersey Docks and Harbour Board propose to provide an upper floor at sections 6, 7, and 8 of the shed on the south side of the Huskisson Branch Dock, No. 2, with the necessary cranes, etc., at a total estimated cost of £17,250, and to erect a shed at the eastern end of the north quay of the West Float, Birkenhead, with railway sidings and roadways, at a total estimated cost of £31,950. Without opposition from a single ratepayer a L.G.B. inquiry has been conducted into the application of the City Council for leave to borrow £70,000 for the erection of Pierhead Baths and offices, and to borrow £9,000 in order to provide better official and public facilities at the Central Free Library, Museum, and Walker Art Gallery.

Llandudno.—A new picture palace is to be erected in Mostyn-street. An important scheme for a new road to Llandudno is about to be carried out, the Road Board having made a grant of £6,000 towards the expense.

Llanilltyd.—A movement is on foot to erect a memorial chapel to the Rev. Cadwaladr Jones, who for forty years was a minister at Dolgelly, and editor of the *Dysgedydd*.

Lynn.—The T.C. have adopted a scheme for laying out Friars-fields in building plots for 130 houses, to let at rents from £10 to £18 per annum.

March.—The U.D.C. having applied to the L.G.B. for sanction to borrow £2,900 for the purchase of 6 acres 1 rood, 12 poles of land in Gaul-road, and for the building of sixteen houses on part of the land, the remainder to be utilised for the present for storage purposes, an inquiry into the application has been held.

Merton.—A L.G.B. inquiry has been held into the application of the U.D.C. for sanction to borrow £1,600 for the erection of a fire-station adjoining the Council offices, and £575 for the extension of the depôt.

Mexborough.—The L.G.B. have held an inquiry into the application of the U.D.C. for sanction to borrow £850 for laying-out for use as a public park the Castle Hills.

Middlesbrough.—Plans and estimates for the extension of the Middlesbrough Asylum so as to increase the accommodation to the extent of sixty beds have been prepared by the Borough Engineer, Mr. S. E. Burgess. The estimated cost of building and furnishing is £7,952, but the Asylum Committee have resolved not to proceed with the scheme beyond erecting three additional nurses' cubicles.

Nelson.—Plans passed:—Mr. J. T. Dent, shop front, 99, Manchester-road; Messrs. Jas. Nelson, mechanic's shop, etc., Valley Mills; Mr. Jas. Reynard, alterations, 31, Scotland-road; Mr. J. C. Waddington, estate plan, Marsden Hall Estate.

Newport, Mon.—The T.C. have decided to erect 100 workmen's houses.

Newton Abbot.—The R.D.C. have accepted plans by Mr. Segar for the erection of twelve houses at Chudleigh in two blocks of six, the estimated cost of each house being £200, exclusive of the cost of land.

Pawlett.—Strong efforts are being made to commence the restoration of the parish church, a portion of the roof of which has lately collapsed.

Perth.—The T.C. have appointed Messrs. Crouch, Hogg, and Easton, engineers, of Glasgow, to advise them in regard to the water supply.

Peterborough.—Plans are before the T.C. from Messrs. Murkett Bros. for the conversion of the Golden Lion Hotel into garage premises.

Pontardawe.—The B.G. have adopted a plan for the conversion of the isolation block into a pthisical ward, at an estimated cost of £1,050.

Reigate.—Plans passed by R.D.C.:—Additions to house, Nunlands, Mason's Bridge, Horley, Mr. Joseph Hall; cottage and addition to motor garage, Kingswood, Mr. C. O. Barry, Pilgrim's Holt, Kingswood.

Rugby.—Plans approved by the R.D.C. for a house at Westfield Estate, Bilton, for Mr. Hutchison; house at Bilton Estate for Mr. Higgie; four bungalows, Hilmorton Paddox, for Mr. S. Robbins; eight houses and shop, Hillmorton Paddox, for Mr. Howe; priests' house, Bourton, for Mr. J. F. Shaw.

South Shields.—The Town Improvement and Health Committee are recommending the T.C. without delay to adopt the water-carriage system in existing properties as well as in all new properties. The cost is estimated at £30,000.

Southwold.—The T.C. will apply to the L.G.B. for a loan of £300 to construct an additional groyne.

Stafford.—The T.C. propose carrying out alterations and improvements at the Borough Hall, at a cost of £2,500. Plans passed: Staffordshire General Infirmary, new laundry; Messrs. Barton & Riley, extension and alteration to factory in St. Patrick's-place; Mr. T. Lloyd, extension to premises in Marston-road.

Stalybridge.—Plans approved by T.C.:—Alterations to the Floating Light Inn, Bridge-street, belonging to Mr. J. H. Davies; slashing and knotting rooms and warp store in Leech-street by Messrs. John Leech & Sons, Ltd.; new weaving shed, etc., in Grosvenor-street and Leech-street by Messrs. John Leech & Son, Ltd.; billiard hall in Market-street by Messrs. Willie Holt (Burnley), Ltd.

Swadlincote.—Plans passed by U.D.C.:—Mr. M. T. Sabine, motor garage, Midland-road, Swadlincote; Messrs. Brunt, Bucknall, & Co., for new porch and alterations to William the Fourth Inn, Church-street, Church Gresley; Mr. Jabez Gough, alterations to house, No. 36, Bretby-road, Newhall; Major Hatchett, conversion of two houses and shops into three dwelling-houses, Coppice Side, Swadlincote.

Tonbridge.—The R.D.C. have decided to apply to the L.G.B. for sanction to borrow a sum of £9,439 for the erection of forty-eight houses in Hildenborough area.

Troon.—The T.C. have agreed to proceed with a scheme of sewage disposal on the north shore, at an estimated cost of £1,916.

Twickenham.—Plans for an electricity sub-station for the London and South-Western Railway Company have been approved.

Tyldesley.—The owners of the new Astley Green Colliery, near Tyldesley, which, when fully opened out, will be one of the largest and deepest collieries in the country, and will employ nearly 3,000 men, intend to erect 270 houses in the township during the coming summer. The new dwellings will be of the semi-detached type, with ample garden space, and will be built on garden city lines.

Ulverston.—Plans passed by R.D.C.:—House for Mr. J. Crossley at Outgate; additions to church school at Torver; new house at Ghyll Head for Messrs. Proctor & Birkbeck, architects, Lancaster.

Walsall.—The T.C. have decided to extend the gasworks, at a cost of £475, and have instructed

a committee to prepare plans for 200 houses for the working classes.

Warrington.—An L.G.B. inquiry has been held into the application of the Corporation for sanction to borrowing of £14,550 for the extension of the electricity works and plant.

Wem.—Mr. R. Matthews, architect, has been instructed by the U.D.C. to prepare plans for a cattle market.

West Hartlepool.—Plans passed by T.C.:—Mr. T. Clarkson, alteration and addition to premises, Albert-street; Messrs. W. Jesseman & Co., motor garage, Elm-grove; Messrs. Johnson Bros., altering shop premises, No. 5, Lynn-street; Mr. S. Handley, alteration of shop, Oxford-street and South-parade.

West Thurrock.—Sanction has been given to the P.C. borrowing £2,200 for a burial-ground. The P.C. have approved of the plan, prepared by Mr. F. J. Winter, of Southend, for the erection of cottages in the parish.

Winchcombe.—The R.D.C. have decided to apply to the L.G.B. for sanction to borrow £2,300 for the erection of twelve cottages on Great-road.

Wolverhampton.—The T.C. have decided to formulate a scheme for erecting workmen's houses.

Wrexham.—Plans passed by R.D.C.:—For 200 houses to be erected at Acton by the Wrexham Tenants, Ltd., and of two houses at New Broughton by Messrs. R. & T. Williams.

GENERAL BUILDING NEWS.

ST. MICHAEL'S CHURCH, CORNHILL.

Building operations are in progress in connection with Wren's St. Michael's Church, Cornhill, E.C. The church itself is being refloored and the organ apparatus is being altered. The rectory is to be rebuilt. The old building was put up shortly after the Great Fire, and will now be replaced. It had an interesting old room on the ground floor, which was used as the vestry-room of the parish, and this was lined with Jacobean oak wainscoting, which, however, had been obscured by successive coats of paint. It will be restored to its pristine condition and used in the new structure. The architect for the work is Mr. Charles Reilly, F.R.I.B.A., St. Swithin's-lane, E.C., and the contractors are Messrs. Ashby & Horner, Aldgate, E.

L.C.C. SCHOOL, CAPLAND-STREET, N.W.

The Capland-street School is being remodelled under the architectural guidance of Mr. W. E. Riley, F.R.I.B.A., Superintending Architect of the London County Council. The general contractors are Messrs. J. Chessum & Sons, South-place, E.C.

NEWSPAPER OFFICES, FLEET-STREET, E.C.

New premises for Messrs. John Leng & Co., Ltd., have been completed recently in Fleet-street, near St. Dunstan's Church. The architects were Messrs. Meakin, Archer, & Stoneham, Nicholas-lane, E.C., and the general contractors were Messrs. A. J. Staines & Co., Ltd., Bishopsgate, E.C. The fireproof floors were by the Siegwart Company; the electric lift was by Messrs. Spagnoletti, Ltd., Shepherd's Bush, W.; the lighting by Electrical Installations, Ltd., Martin's-lane, Cannon-street, E.C.; and the heating was by Messrs. C. P. Kinnell & Co., Ltd., Southwark-street, S.E.

BUSINESS PREMISES, NEW OXFORD-STREET.

For many years there has been a large poster hoarding fronting Meux's Brewery in New Oxford-street at Tottenham Court-road. The lower part of this is now being removed, and in its place will be erected a series of shops, with basements. The work is being carried out under the architectural guidance of Messrs. Taperell & Haas, John-street, Adelphi; and the general contractors are Messrs. George Greenwood & Sons, London and Halifax.

MOTOR WORKS, ST. QUINTIN PARK, W.

Extensions to the Clement Talbot Motor Works are in progress at Barlby-road, St. Quintin Park, W. The architect is Mr. W. T. Walker, F.R.I.B.A., Finsbury-square, E.C., who designed the original building. The work consists in erecting four new shops, with north lights, on the same plan as the existing bays. The general contractors are Messrs. Walter Lawrence & Son, Finsbury-circus, E.C., and the steelwork is by Messrs. E. C. & J. Keay, Ltd., Corporation-street, Birmingham. The glazing is by Messrs. Mellowes & Co., Ltd., Victoria-street, S.W.; and Sheffield; the flooring is by Messrs. Ellis, Geary, & Co., Ltd., Cannon-street, E.C.; the tiling is by Messrs. H. J. & C. Major, Ltd., Bridgwater, Somerset; and the heating is by Messrs. James Slater & Co., Ltd., Wells-street, W.

LONGSTOCK PARK, HANTS.

Alterations and additions, to cost £18,000, are being made to the mansion known as Longstock Park, near Andover, Hants. The architects are Messrs. Joseph & Smithem, Queen-street, Cheapside.

TRADE NEWS.

We learn that the Bilton Council Schools are being built with "Pudlo" incorporated in the cement-work.

Under the direction of Messrs. Blanchard & Wheatley, architects, Hull, Boyle's latest patent "air-pump" ventilators have been applied to New Wesleyan Chapel, Anlaby Common, near Hull.

The General Hospital, Bristol, is being supplied with Shorland's double-fronted warm-air ventilating patent Manchester stoves with descending smoke flues by Messrs. E. H. Shorland & Brother, Ltd., of Failsworth, Manchester.

SEWERAGE AND WATER SUPPLY SCHEMES, ST. DOGMAELS, PEMBROKESHIRE.

Separate sewerage and sewage disposal schemes and water supply schemes are to be prepared for each of the following districts, namely, Newport, Kilgerran, and St. Dogmaels. Mr. T. J. Moss-Flower, of 28, Victoria-street, Westminster, and Bristol, has been appointed engineer in connection with these works.

OBITUARY.

Mr. J. H. Trollope.

Mr. Joseph Harvey Trollope died at his residence, Queenswood, Beddington, Surrey, on February 10, aged eighty-five years. He was the fourth son of the late George Trollope, of Westminster, and was a partner, with his father and two elder brothers, Robert and George, in the firm of Messrs. George Trollope & Sons, builders and contractors. He retired from the business twenty-three years ago; the firm has since entered into amalgamation with Messrs. Colls & Sons.

Mr. D. Henry.

Mr. David Henry, architect, died at his residence, Esther Ville, St. Andrews, recently. Mr. Henry went to St. Andrews over half a century ago and joined the late Bailie Hall. Mr. Henry took considerable interest in antiquarian research, and wrote much in connection with antiquarian matters. He recently published a work on the "Knights of St. John in St. Andrews." He served several terms as a member of Town Council, and was a magistrate for several years. He also served on the School Board and Parish Council.

M. E. Vaudremer.

The death in Paris last week is announced of M. E. Vaudremer, a prominent French architect, who based his work upon the older traditions of the schools. He was the architect of several seminaries, and the churches of Notre Dame d'Auteuil and Saint Pierre de Montrouge.

M. Van Hove.

The death is announced also of M. Bartholomeus Van Hove, of Amsterdam, the Dutch sculptor. He was a pupil of Cavelier, and for many years contributed to the exhibitions in Paris.

PATENTS.

APPLICATIONS PUBLISHED.*

27,669 of 1912.—Jens Ernest Schmidt: Door-closing device.

27,845 of 1912.—Willis Michael Prather: Vault lights, pavements, mosaics, and the like.

28,782 of 1912.—Albert Hanley: Safety means for pit-shaft and other scaffold workers when such accidentally slip at work.

49 of 1913.—Leonard Erskine Hill: Apparatus for estimating the temperature and hygrometric condition of halls and the like.

107 of 1913.—Robert Hagyard: Ventilating shafts for drains and the like.

434 of 1913.—Emil Offenbacher: Circular saws for sawing stone, glass, and the like.

761 of 1913.—The Midland Plastering Company, Ltd., and John Horatio Hotching: Plaster coverings for walls and the like.

876 of 1913.—Joseph Truman: Brush tools for painting the bars or rods comprising or forming members of metal palisades and other structures.

1,708 of 1913.—Alfred Hammer: Concrete floors and ceilings.

1,730 of 1913.—Felix Gain: Windows.

1,945 of 1913.—Royles, Ltd., Oliver M tthe s Row, and Wilfrid Harold Porter: Method of and means for purifying bath water.

2,091 of 1913.—Bertram Charles Wotton: Fireproof windows.

*All these applications are in the stage in which opposition to the grant of Patents upon them can be made.

PARLIAMENTARY NOTES.

London Building Trade Dispute.

REPLYING to questions asked in the House of Commons by Mr. Tyson Wilson and Mr. C. Duncan, Mr. Wedgwood Benn stated that work on the large lump-sum contracts between the Board of Works and the members of the London Master Builders' Association is suspended, but the necessary work of maintenance in public buildings is being carried on. He did not think he could take any action with reference to the contracts. It was true that three young men discharged from the Borstal Institution, employed by Messrs. Holloway Brothers, and were working at the new Home Office, being erected under contract by Messrs. Holloway Brothers, but they were not taking the places of those who are either locked out or are on strike.

Victoria and Albert Museum.

In the Parliamentary Papers Mr. Grant asked the President of the Board of Education if the destruction of the majolica columns of the old ceramic gallery, or lecture theatre gallery, in the Victoria and Albert Museum had been so complete that not a single specimen of them had been preserved.

Mr. Pease replied that none of the columns in the old ceramic gallery have been preserved, but all the originals, from which the columns in the gallery were adapted, are in the central refreshment-room, and they were, and would remain, available for students and others desiring to study this class of work.

Mr. Grant also asked if the President was aware that no specimens of middle Victorian pottery contemporary with the majolica columns in the old ceramic gallery of the Victoria and Albert Museum had ever been or were exhibited in that gallery; and, if so, what steps he proposed to take.

Mr. Pease replied that between the years 1844 and 1869 more than 1,000 specimens of contemporaneous pottery, including 356 pieces bought at the Paris Exhibition in 1867, were purchased for the Museum. In Appendix D of the Fifteenth Report (1869) of the Science and Art Department, page 210, it was stated that a great improvement in the general classification of the collections was in the course of being carried out by grouping the whole of the examples of ceramic art, the property of the museum, and by arranging the collection in the new corridor of the lecture theatre. In Appendix D of the Sixteenth Report (1869), page 296, it was stated that the new ceramic gallery now open to the public had been filled with specimens of the potter's art of all countries and periods. In Appendix D of the Eighteenth Report (1871), page 383, it was stated that the ceramic collection, which had been moved to allow of the painting and decoration of the walls of the gallery, had been entirely rearranged and all the new acquisitions exhibited in their respective divisions.

The President was further asked by Mr. Grant if the Committee who advised him upon the new decoration of the old ceramic gallery in the Victoria and Albert Museum were instructed to consider their recommendations, especially with reference to the exhibition of works of art of the times of Louis XIV. and Louis XV. contained in the Jones Bequest; and if he was aware that such works formed only a portion of this collection, the whole of which must, under the terms of the bequest, be exhibited together and may not be separated.

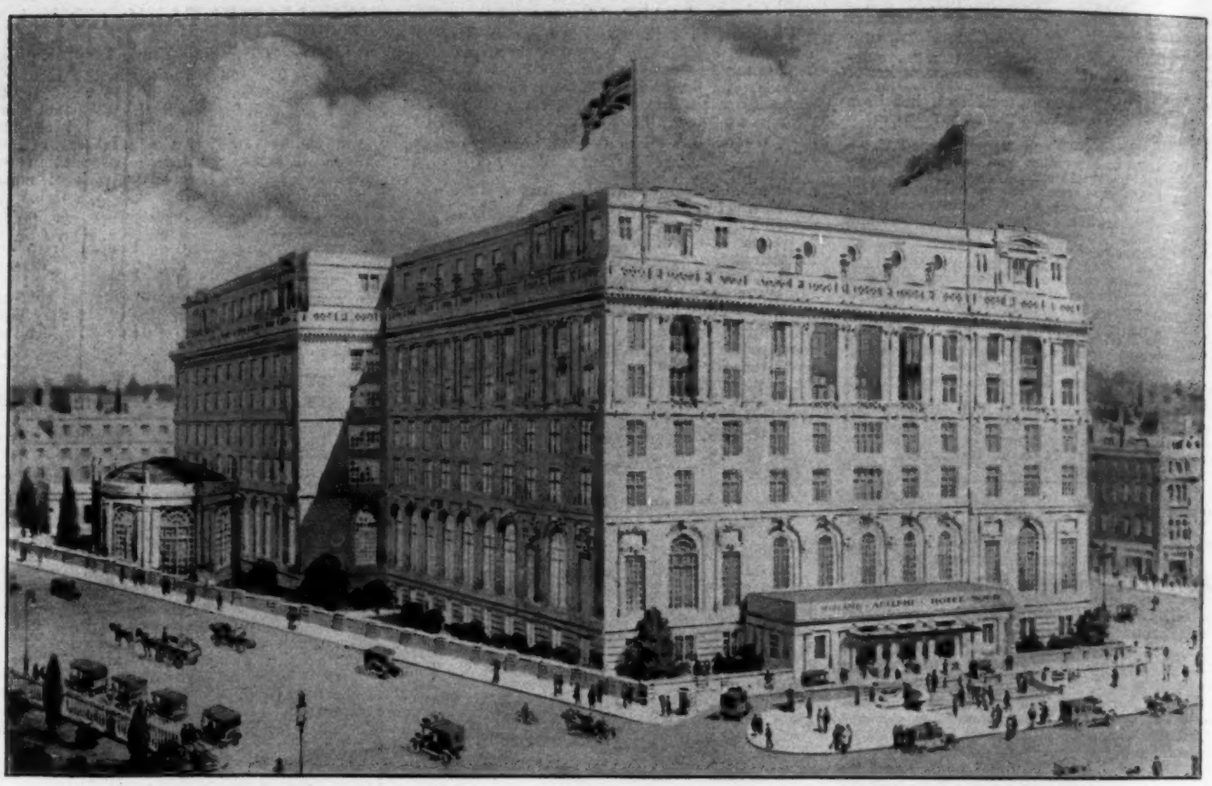
Mr. Pease: The answer to the first part of the question is in the negative, and to the second part in the affirmative.

WESTMINSTER CITY COUNCIL.

AT the fortnightly sitting of the Westminster City Council on February 12 the following matters were dealt with:—

Westminster Hospital Site.—The Improvements Committee reported on a letter received from the London Society expressing the hope that the Council would use its powers, under the clause in the Act authorising the sale of the site of Westminster Hospital, to widen Broad Sanctuary. The Committee had asked H.M. Office of Works if the Government would be prepared to co-operate in carrying out such a scheme, and had received a reply in the negative. It was decided that the Committee should again consider the matter.

Mall Approach.—A letter had been received from the Phœnix Assurance Company offering to sell the land required for the Mall Approach scheme on reasonable terms, and to agree to a scheme of rebuilding. It was agreed that the matter should be dealt with by the Joint Committee, which has the matter in hand.



Midland Adelphi Hotel, Liverpool: Perspective Sketch of the Completed Building.

Mr. R. Frank Atkinson, F.R.I.B.A., Architect.

(For a description of the building and other illustrations see our issue last week.)

THE CONCRETE INSTITUTE:
"FACTORY CONSTRUCTION."

AT a recent meeting of the Concrete Institute a paper on "Factory Construction" was read by Mr. Percival M. Fraser, A.R.I.B.A., M.R.S.I., M.C.I. In the course of his remarks the author said:—

"It is now generally recognised that a well-equipped series of shops is an absolutely essential factor in a successful industrial concern. It is as important as the machinery and plant and the site. It is not difficult to prove that these will be crippled by being housed in unsuitable buildings, where the first must be limited in efficiency, under-driven, and wastefully or harmfully worked, and the second so badly utilised as to counteract its peculiar merits. To be completely efficient it is necessary to be as thoroughly up to date in the buildings as in the plant, for to be up to date means to have taken advantage of every development and improvement in machinery and organisation, and, other things being equal, indirectly it is the most important factor in success.

The attempted adaptation of groups of buildings to a use foreign to that for which they were designed is one explanation of the grotesque jumble of nondescript buildings dignified by the name of industrial buildings which we so often see, and it is one of the reasons why this country is unable to maintain its ascendancy in the world's manufacturing commerce.

It is also true that in the majority of cases economy could have been effected had the old buildings been scrapped and an entirely new series of buildings erected. I seriously suggest that the English factory owner requires educating in such matters as this, and that he has a great deal to learn from the United States on such points. The American will frankly admit that he does not build his factories for posterity, but is content if they last a couple of generations. I do not suggest that we are incapable in England of erecting efficient ranges of factories, and I trust that we shall never erect buildings which will depreciate 100 per cent. in fifty years, but there is a happy medium of design and expenditure in regard to factory construction which we should endeavour to seek.

There is a great deal that is incongruous in our industrial works. A typical English power plant represents the finest product of human workmanship, and the employees, from the chief engineer to the humblest stoker, take a pride in keeping it at its highest pitch of efficiency and scrupulously clean, for to their mechanical minds it is a thing of beauty; but this is ordinarily housed without scruple in a corrugated iron building, which is not only an eyesore but totally incapable of efficiently protecting the expensive machinery it contains. I have in mind an engineering works where some new machine tools, very complicated and costly and requiring perfect conditions of lighting, space, and drive, are housed in a corrugated iron and timber-framed building which was purchased and erected at a cost of £60, having previously been a gymnasium in connection with a boys' club. It is unfortunately this type of construction which reinforced concrete has to compete with in cost, though it is evident that such a building is dear at any price and possesses only one advantage—namely, that it is easily pulled down by the factory owner when he eventually finds that no adequate return on the capital outlay of the plant is possible under such conditions.

The Design of Industrial Buildings.

Among the questions which frequently come before an architect in designing industrial buildings is the following:—Whether the building as a whole should be one story or more in height. This question is often automatically disposed of by the cost of land, the amount of labour to be accommodated, and the nature of the machinery. Unless the foundations are likely to prove abnormally expensive it will generally be found, however, that the one-story building can be constructed the more cheaply.

A second important detail which practically always arises is the question of eliminating columns or reducing their number and planning their positions to the best effect. When the engineer does not object to columns be sure he has evil designs on them, and ample strength should be provided accordingly.

Other questions which must infallibly arise are the nature of the lighting, which must, for many manufactures, be from the roof. In two-story buildings the width of the building is determined hereby, but it is an advantage to make the upper floor with roof light. Too much daylight, unlike artificial light, cannot be provided, but the increase of window space will add to cost and complicate heating and ventilation. The north or sawtooth roof is always an advantage, but is not always worth the expense, costing, as it does, 10 per cent. more than an ordinary pitched roof in steel or 20 per cent. more than a flat roof in reinforced concrete.

With regard to the clear height of workrooms, a margin should be allowed over the bare necessity, as it is comparatively cheap to add to the height of a floor, and a lofty room conduces greatly to its general utility.

Advantages and Disadvantages of Reinforced Concrete for Factory Construction in Comparison with the Prevailing Methods of Construction.

The serious competitors of reinforced concrete which are at present before the building world are as follows:—

Brick, steel, and cast-iron, wood, sheet-iron, and metal lathing and plastering, tiling, terra-cotta, or similar slabbing and casing, and a number of patent forms of construction too numerous to mention and most difficult to classify, most of which, however, come within the scope of reinforced concrete in one or more respects.

It is exceedingly difficult, if not impossible, to definitely pronounce on the comparative economies of the foregoing materials, and we can only take specific instances and endeavour to generalise from these. I am able to give a case where competitive prices were obtained for a building, which is of a fair size, straightforward, and a really useful one for this comparison. In this case alternative schemes were prepared in the fullest detail and competitive prices obtained. The results were as follows:—

	Per cent.
1. For a steel-frame building with brick walls, corrugated iron roof (two-thirds north light), wood joists and boards on steel bearers to galleries, and patent glazing to roofs, the cost was	100
2. For a reinforced concrete building with roofs as last	92
3. As last, but with concrete roofs, part flat, part with north lantern lights, but with brick panel walls	89
4. As No. 1, but with corrugated iron walls	89
5. Wholly in reinforced concrete	88

The building was actually carried out in reinforced concrete, including the gutters, down pipes, roofs, walls, foundations, and every detail where it was possible for this material to be used. I may say that in this case there

were no special circumstances whatsoever in favour of reinforced concrete; indeed, the question of the supply of aggregate was a very difficult one, as it had to be brought from 25 to 30 miles by rail. In my experience I have found that the foregoing figures will apply to all cases of ordinary buildings costing more than, say, £2,000. A building of less cost will, generally speaking, be found cheaper in some other form of construction, and I believe walls will nearly always be found cheaper in brick panels than in concrete slabs.

Maintenance.

The freedom of concrete from deterioration permits of savings in maintenance charges. These are exceedingly great in large series of factory buildings, and can never be shown on paper. Maintenance means more than merely guarding against the ravages of time. The necessity for maintenance implies decay; the maintenance costs are a dead loss, and maintenance is in itself a thankless job owing to the fact that it is simply patched-up work, merely staving off the inevitable, which every year becomes at once more onerous and more useless.

There is no material that I know of where maintenance is not necessary. Good brickwork is perhaps as free from this as any material provided the bricks are carefully selected, well built, and pointed in cement. In such a case brickwork should remain without repair indefinitely. This also applies to stonework where not exposed to smoke and fumes, but the use of stone is so restricted in England that it need not be further considered.

With regard to the use of steel-frame construction, I strongly believe that, as carried out at present, it is liable to serious depreciation, and it has the very great disadvantage in that this depreciation cannot be guarded against or amended. A very large number of buildings are erected where the steel construction is cased in brickwork with no special precautions taken to protect the steelwork permanently against rusting. The continental system of building up with steel construction and filling the panels with brickwork, leaving the construction of steelwork exposed and painting same, is, of course, liable to depreciation, which must invariably destroy the structure in the course of time.

The various forms of patent slabbings for walls and roofs depend entirely upon an applied outer surface, and no such construction is found to be really permanent. It is always liable to cracks, through which the moisture can penetrate and attack the body of the walls, and the failure of the casing rapidly follows.

Considering, therefore, the claims of reinforced concrete, without wishing to be unduly enthusiastic, I think it may be reasonably asserted that, after a lengthy trial and the closest scrutiny of our chemists, architects, engineers, and constructors, reinforced concrete is, practically speaking, free from depreciation if constructed according to the latest approved practice.

Fire-Resisting Properties.

The fire-resisting properties of various forms of construction are of paramount importance in factory buildings. The effect of fire-resisting construction in reducing insurance premiums is but a small matter compared with the damage which ensues to a business owing to the extreme dislocation caused by a fire, which no insurance can ever cover, for we have to consider the financial loss in the shape of buildings, plant, and machinery ruined, the destruction of office documents which cannot be replaced, and the permanent loss of many skilled workmen who are thrown temporarily out of work, and the occasional terrible loss of life. The output of a firm is, moreover, temporarily paralysed, the normal trend of business is disorganised for a considerable period, and the eventual effect is that the insurance company will not reinsure at the same rates.

Nothing is, of course, fireproof, but we have to seek for the nearest approach to this ideal. Ordinary reinforced concrete construction is as efficient a fire resister as can be found. The metal is naturally guarded against by the concrete covering. There is nothing combustible about the construction; it is not liable to exercise a dangerous thrusting or overturning action, even when heated and suddenly cooled. It is, of course, liable when quenched with a strong shower of cold water to have the covering of slabs and beams either flake off or disintegrate. It is rarely or never found that any of the concrete, beyond the covering to the reinforcement, suffers any irreparable damage. Any such covering can be broken away where loose and the building restored after the conflagration. It can therefore be fairly claimed that for factory construction which requires a high standard of fire resistance reinforced concrete can rival any other comparable method of construction.

Saving in Space.

A further consideration which applies mainly to warehouse buildings is the importance of affording the utmost floor space for the storage of goods. Construction in London is exceedingly onerous in this respect. Matters have been made considerably easier by the steel-frame amendment of the London Building Act, but it cannot be denied that a considerable encroachment on floor space can be avoided by the use of reinforced concrete walls and supports.

The objection to reinforced concrete, as compared with steel and cast-iron, in respect to posts and columns is that the floor space occupied is considerably more.

It should be remembered that if a steel stanchion is insulated against fire it would be practically as great in sectional area as a concrete column.

Adaptability.

Perhaps the unique merit of reinforced concrete lies in its extraordinarily adaptability. There is no other building material which can be put to such extraordinarily diverse uses without unwarrantable eccentricity or expense. The value of a material which can be used for practically any purpose which may arise in the construction of the wide variety of buildings comprised in industrial works need hardly be dilated upon. The practical economy of such a material is also evident. Provided there are no insurmountable difficulties in getting on to the site steel rods, timber, gravel, and cement, we have at hand constituents which are capable of being moulded into any shape and resisting any strain and fulfil purposes which collectively would require the use of a large number of different materials. In the ingredients of reinforced concrete there is nothing which cannot be readily obtained in the most remote locality of the kingdom. In my own experience, in places 10 or more miles from the nearest station, concrete work always competed in point of economy with any other permanent form of construction, and wherever eccentric designs are to be carried out a plastic material will always hold its own with a material which has to be wrought into shape. And, indeed, it is difficult to conceive any form of building construction which it is not possible to carry out with reasonable economy in reinforced concrete.

Speed of Execution.

Following on the adaptability of reinforced concrete is the speed with which construction can go forward. If a contractor will lay down a well-considered and efficient plant the rapidity with which a concrete job can go forward is remarkable. A larger number of workmen (mostly unskilled labour) can be usefully employed, and the building as a whole can be proceeded with uniformly and in a manner which simplifies supervision. Should it be found desirable in a steel or iron construction to make alteration time is lost in waiting for the various revised members to be delivered. With reinforced concrete such deviations can readily be made.

Artistic Design.

An objection which is often urged against concrete buildings, which does not apply to brickwork or the usual form of construction, is that it is by nature unsightly. If appearance is an object in a reinforced concrete building I do not hesitate for a moment to say that a very agreeable effect can be obtained by perfectly legitimate and economical means. Those interested in the possibilities of beauty in reinforced concrete will do well to read Professor Beresford Pite's paper published in the *Transactions* of this Institute, Vol. III.

Alterations to Finished Buildings.

Another objection which may be held against reinforced concrete, especially for factory construction, is the great difficulty of making alterations which may be found necessary for various reasons, such as an expansion of business. But, in the first place, a successful factory owner should be able to see so far ahead that possible extensions can be provided for at the outset; secondly, that the practice of installing departments into buildings not intended for their use always produces inefficiency and undue expense; and, thirdly, that, assuming the building has to be altered owing to circumstances which no brain could have foreseen, such extensions and alterations are not impossible. Even if the expense of same is abnormal it is one of those factors which every shrewd business man will be prepared for, for, in the same way, he has frequently to throw on the scrap-heap a valuable machine which has been supplanted by something which saves more time or labour in output.

It cannot be denied that concrete, when it has settled down, is an exceedingly tough material, but the great strength to which this material attains should hardly be urged as an objection to its use.

Building By-laws.

An objection to reinforced concrete construction, which will die out in course of time, is the antipathy to a novel method of construction which, I am afraid, is characteristic of the Englishman. I find, however, that individual building owners are easily converted if one honestly points out to them the limitations and the advantages of concrete. The most formidable objection lies in the present attitude of the official world, who, in spite of the splendid example which has been set by H.M. Office of Works in developing the use of this material in permanent and often monumental public buildings, have not been affected thereby to the extent of amending their by-laws. We have at present an eminently suitable material for the construction of permanent buildings with which it is difficult to satisfy local authorities, who, on the other hand, will readily sanction a construction of light steel stanchions and roof trusses covered with corrugated sheeting. Fortunately there appears to be nothing in local building by-laws which empowers the local surveyor to reject buildings in reinforced concrete, and if an architect can persuade his client to go forward with his building I do not believe that he can be prevented. It is not, of course, pleasant to come into conflict with a local surveyor, and the architect generally feels that the best advice he can give to his client is that the more orthodox form of construction should be adopted. I need not enter upon the question of the London County Council's proposed regulations, but I certainly trust that ere six months have passed these regulations will be duly in force, and I trust their example will be followed immediately by all the local authorities throughout the kingdom.

Fixing Plant.

The one great advantage of structural steel in factory construction is the ease with which machinery can be fixed to the steel members. That this use is often turned into abuse is beside the point, but I have frequently heard engineers state that they prefer steel to reinforced concrete for this reason. A little foresight will enable an architect to meet this objection with satisfaction to the factory owner. If an engineer desires to fix, say, a light motor he does not hesitate to drill a steel stanchion or girder as may be necessary to get a good fixing. By drilling two holes 1 in. in diameter in a girder he reduces a section as indicated on the diagram, whereas similar fixing on a concrete beam in theory has no effect upon the strength of the beam. In this respect concrete is advantageous, and it is at least as cheap as drilling in steel.

The bulk of a concrete member is so comparatively large in relation to a rolled steel member of equivalent strength that the resulting damage of cutting into such member is proportionately reduced. Comparing the members shown, the sectional areas of the steel joist and of the concrete beam are in the proportion of 1 to 7 for equivalent strengths. It is obvious, therefore, that the concrete member will stand much more mutilation without jeopardising its strength than the steel joist. Provision should and can readily be made, therefore, for fixing to soffits of slabs or beams.

A simple means of providing for light fixings is obtained by casting a groove in the beams and columns, so that a fixing can be obtained with the greatest ease without in any way having to go into the concrete. For gas or water-pipes and mains or cables of any description this fixing is very simple, and a good engineering job; again, the indiscriminate fixing of shafting to walls is accompanied with greater

safety on reinforced concrete slabs than on brickwork, which is liable to give along the joints, and the weight, of course, is not so evenly distributed.

Roof Construction.

The low thermal conductivity of concrete gives it an advantage over the ordinary forms of roofing, apart from other considerations. The usual precautions taken are to construct a roof of timber with thick boarding overlaid with felt, upon which are placed battens and counter-battens and thick slating. This forms a fairly effective insulation, but the construction is at least as expensive as a concrete flat asphalted. For flat roofs and in all places where exposed to damp or water pressure concrete can be made, with due care, absolutely waterproof, and a very valuable and convenient arrangement which is now often adopted is to construct concrete roofs with high parapet walls and utilise them for water storage. This has a further advantage that the water is generally at a convenient height to be drawn off under pressure."

Various applications of reinforced concrete to factory construction were described by the author and illustrated by slides.

REINFORCED CONCRETE.

A PAPER by Mr. H. E. Steinberg, Assoc.M.Inst.C.E., on "The Common Sense of Reinforced-Concrete Design and Construction" was read before the members of the Ipswich Engineering Society recently.

Mr. Steinberg dealt mainly with the fundamental principles which were common to all systems of design and all types of reinforcement. Owing to the number of so-called inventions with which reinforced concrete was beset he said it would be most useful if he gave his audience some idea as to how the relative worth of the various methods and designs could be appraised and their practical value judged in one consistent manner. In England practically no experimental work worthy of the name had been done, though a few badly-designed beams and columns had been broken at various times by isolated enthusiasts. He spoke of the disappointment caused by the first Report of the Institution of Civil Engineers, though the second Report contained an account of some ingeniously-planned experiments by Dr. Unwin on plain and reinforced, square and rectangular concrete slabs. In all foreign countries where building was in progress the use of reinforced concrete appeared to be very extensive, especially so in places liable to earthquakes, as the reports of the San Francisco disaster showed that the reinforced buildings withstood both the earthquake and the subsequent fire more satisfactorily than the steel skeleton buildings. With reference to the practical details of construction, he first observed that it was chiefly the cheapness of the material, which, other things being equal, had made it so phenomenally successful. He laid it down that if the same unit stresses were specified and worked to by all designers, then the cost of all systems must be very closely approximately the same for any particular structure. At the same time he asked them to observe that, though there might be little difference in cost between designs they might vary in merit, either by the actual details of the arrangement of bars, etc., or by the general engineering ability underlying the design. The bending moment in a beam might be calculated accurately for each span and over each support, with all the meticulous niceties of the theory of continuous beams, or, on the other hand, a simple, easy fraction like WL/10 might be taken for the bending moment in the span over the supports and anywhere else. In either case the cost of the job would not vary much, but in practice the latter design would develop cracks, whilst the other would have a uniform factor of safety throughout. From this point the lecturer went into still more technical details, in order to explain the common-sense principles underlying all systems of reinforced-concrete design. Amongst the matters alluded to were the extent to which concrete might be safely relied on to stick to steel so that they could arrange for their reinforcement to have sufficient superficial surface, in proportion to the cross-sectional area; of how to increase points of weakness by widening the beam, by embedding reinforcement, or by increasing the depth of the beam. It was a simple matter to say that this part would be in tension, that in compression, and that the other was trying to slide relatively to another part; but it was not so easy to determine how many tons' tension there might be there, how many pounds' compression there, and exactly to what extent one portion of the concrete was shearing in respect to another. These, however, were the problems which must be solved by every designer, and the merit would depend on the accuracy of the various solutions. After showing the advantage of reinforcing by spiral and other methods, he concluded by saying that the future would be with the specialist designing firms, with a greater tendency to specify a system of design so that the firms would be able to lower their fees. The largest amount of work would accrue to those firms whose reputation was the best for turning out designs accurately, clearly, and quickly. The amount of reinforced concrete done in Great Britain every year approximated to about £1,000,000. The use of the material would increase for all heavy building work, and for silos, wharves, and jetties, but not for domestic architecture, nor for cheap workmen's cottages.

MAGAZINES AND REVIEWS.

IN *Nineteenth Century and After* is an interesting article on "Clubland Two Hundred Years Ago," by Miss E. A. Drew, which contains some amusing and entertaining quotations in reference to clubs and club-life. The first coffee-house, it appears, was opened as early as 1650, in Oxford. The fashion soon spread, and many houses were opened in the next few years and much patronised by those undergraduates of the University who "esteemed themselves wits." In the year 1700 there were 3,000 coffee-houses in London. Miss Drew has something to say about most of the well-known clubs of the time.

The *Architectural Record* of New York contains an interesting account of St. Thomas's Church, New York City, which was built to replace a church burnt down in 1905, and was the subject of a limited competition, which was won by Messrs. Cram, Goodhue, & Ferguson, and which is an excellent essay in Gothic design. Articles on "Grammatan Court," which is described as a fireproof suburban residence, and the "Garden City of Helleran," in Germany, follow, as well as some notes on the competition designs of the American Academy in Rome. We feel that the number, though containing some interesting matter, is not quite up to the standard usually reached by the *Architectural Record*.

The *Engineering Magazine* (New York) contains in its February number several articles of interest. "The American Mining Industry and its Future Prospects" are dealt with by Mr. Horace V. Winchell, who points out that the enormous development of mining in the U.S.A. has been due to the wise Governmental policy pursued, under which both mines and homesteads have been given to all who chose to come, settle, and use, or given in exchange for a nominal consideration. Without such action on the part of the Government American mining might be as undeveloped as that of Alaska. It is pointed out that America has now to face the competition of newer undeveloped countries, and that if she is to retain her supremacy many defects in mining laws will have to be remedied, and among others it must be made impossible for anyone owning land to prevent its development. The lack of uniformity in inter-State laws, the unfairness and inequality of taxation, are other defects to be done away with. Mr. Edwin C. Eckel deals with "The American Steel Industry Under Competition," while "Steel Making in America" forms another article by Mr. L. De G. Moss, and the remainder of the number is taken up with articles on various technical subjects, with which we have not space to deal here. The magazine is always one of those of most importance and interest to engineers.

Harper's contains nothing of special interest to our readers except a gossipy article by Mr. Edward S. Martin, entitled "A Philosopher in Central Park," with some good illustrations in tint by Mr. Lester G. Hornby. The article is an interesting one, and the following opening remarks will be appreciated by those who know New York City:—

New York would have been a more interesting city if it had climbed over the island of Manhattan instead of grading and squaring it all into such a checker-board pattern. You see that in Central Park, where the original rocks have been left about as they were, and the roads follow more or less the lines of least resistance. There are hills in the Park, and the roads run around them; dales and gullies that the roads and paths run through; ponds that they skirt or cross on bridges. So it was originally with the rest of the island. It was all rocky, irregular, tumultuous, disordered. But surveyors laid it out; not with judgment and regard for nature, as cows would have done, but in the hard fashion usual to surveyors who squint through those glasses that top their tripods, and contrive straight streets on their maps, and practise to obtain right-angled lots. And so one thing that makes Central Park so great a medicine is the soothing contrast that it offers to everything around it. You come in there out of the monotony of streets that run east and west, and avenues that stretch interminably north and south, into one considerable tract where a straight line is a great rarity. The Mall has straight lines, and is level. Some of the meadows are level enough to play tennis on, but flats that are really flat, and straight lines and right angles, are happily rare in Central Park.

HALF-TIMBER HOUSES IN SURREY.

AT the monthly meeting of the Incorporated British Institute of Certified Carpenters, held at Carpenters' Hall, London-wall, on Saturday, February 7, a paper on "Half-Timber Houses in Surrey" was read by Mr. H. Hey, Fellow. The paper was illustrated by numerous lantern slides prepared by the lecturer from photographs taken by himself.

In his introductory remarks the lecturer pointed out that our remaining examples of half-timber work are distributed over an area which coincides with the geographical distribution of the oak. The lecturer dealt with craftwork prior to the Tudor period, and showed views of a fine example of a timber church spire with weather-boarded exterior and internal bracing and buttresses, the latter being roofed over, forming a wider base for the tower. Some interesting examples of domestic building of late fifteenth-century and early sixteenth-century work were shown. Notably a series of slides showing specimens of early half-timber work in manor-houses and other buildings. The various details of "Post and Pan" or "Post and Panel" work (in one case the actual wattle and daub was shown *in situ*), overhanging upper stories with dragon ties to anglepost, and the connection of these to the main beams were clearly shown.

A number of very early examples of door construction were shown, cross-boarded and nailed with nails clenched, the heads of the nails forming a pattern on the face of the door; details of hinges and bolts were also included.

The lecturer traced the development of the particular characteristics of the roofs of the period, remarking on the short hips with a gablet at each end of the ridge, and of the break of the eaves line which led to the development of the dormer window. He also showed a series of views illustrating the barge-boards of the period.

Some miscellaneous views followed, including a fine Tudor doorway and some barns and cartsheds constructed in half-timber work with brick filling and one weather-boarded.

A series of photographs of a sixteenth-century manor-house followed, giving details of the development of ornamental carved braces, mouldings to doors, and windows, while a few slides showing the many-gabled roofs of the seventeenth century closed a most interesting paper.

During the meeting an interesting announcement was made. At the forthcoming exhibition to be held by the Worshipful Company of Carpenters at Carpenters' Hall, London-wall, in June next, the Institute (by kind permission of the Worshipful Company) will offer two silver and two bronze medals to be awarded for works exhibited in the divisions devoted to carpentry and joinery. Further particulars may be obtained from the Hon. Secretary, 29, Canonbury-park South, London, N.

SHOPS, ETC., KENSINGTON HIGH-STREET.

Four shops, with residential premises over, are being erected in the Kensington High-street, W., from designs by Mr. William L. Eves, F.R.I.B.A., Uxbridge. The general contractors are Messrs. Sabey & Son, Ltd., St. Peter's-street, Islington, and the steelwork is by Messrs. H. Young & Co., Ltd., the Nine Elms Ironworks, S.W.

List of Competitions, Contracts, etc.

For some contracts still open, but not included in this List, see previous issues. **Those with an asterisk (*) are advertised in this number:** Competitions, iv.; Contracts, iv. vi. viii. x.; Public Appointments, xxi.; Auction Sales, xxvi. Certain conditions beyond those given in the following information are imposed in some cases, such as: the advertisers do not bind themselves to accept the lowest or any tender; that a fair wages clause shall be observed; that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

*** It must be understood that the following paragraphs are printed as news, and not as advertisements; and that while every endeavour is made to ensure accuracy, we cannot be responsible for errors that may occur.

Competitions.

FEBRUARY 21.—**Carcroft.**—WESLEYAN CHURCH.—The Trustees of the proposed new Wesleyan Methodist church invite architects to submit competitive designs. Particulars of Mr. J. C. Starkie, solicitor, 52, Hallgate, Doncaster.

MARCH 2.—**Hendon, N.W.**—The Hendon U.D.C. invite architects to submit designs in competition for the erection of public baths at The Burroughs, Hendon. Premiums, £100, £75, and £50 respectively. See advertisement in issue of January 9.

MARCH 20.—**Belfast.**—ART GALLERY AND MUSEUM.—The Belfast Corporation invite designs for above buildings. Total cost not to exceed £75,000, of which only £30,000 will be spent at once. Assessor, Mr. John J. Burnet, A.R.S.A., LL.D. See advertisement in issue of November 7.

APRIL 1.—**Sofia.**—DESIGNS FOR A ROYAL PALACE AND LAW COURTS.—Particulars from the Commercial Intelligence Branch of the Board of Trade, Basinghall-street, E.C. See page 173, August 9, and page 350, September 27, 1912; also page 708, June 20.

APRIL 2.—**Ottawa.**—DEPARTMENTAL AND COURTS BUILDINGS.—The Department of Public Works, Ottawa, invite architects to submit sketch designs in a preliminary competition for above buildings. Six will be chosen from these for final competition. The five unsuccessful competitors will receive $3,000. The winner will be entrusted with the work. See particulars in issue for September 19 and advertisement in issue of September 12.

MAY 4.—**London.**—ST. PAUL'S BRIDGE.—The Bridge House Estates Committee of the Corporation of London invite designs from British architects for the architectural treatment of St. Paul's Bridge. Premiums, £300, £200, and £100 respectively. The assessor is Sir William Emerson, P.P.R.I.B.A. See advertisement in issue of December 12.

* MAY 15.—**Home Counties.**—LABOURERS' COTTAGES.—The proprietors of *Concrete and Constructional Engineering* invite designs for labourers' cottages. Premiums 100 guineas, 50 guineas, and 25 guineas respectively, and two at 10 guineas each.

JUNE 20.—**Orillia.**—MONUMENT.—The Executive Committee of the Champlain Tercentenary Committee invite competitive designs for a monument to Samuel de Champlain. Not to cost more than £4,100. See advertisement in issue of February 13.

JANUARY 15, 1915.—COLLEGE MEMORIAL LECTURE HALL.—Designs for the Alexander Thompson Travelling Studentship must be delivered by the above date.

Contracts.

BUILDING.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

FEBRUARY 23.—**Bedwellty.**—CONVENIENCE.—Building a public urinal at Fleur-de-lis for the U.D.C. Specifications of Mr. Dan. H. Price, Surveyor to the Council, Aberbargoed.

FEBRUARY 23.—**Bridlington.**—EXTENSIONS.—For extensions at sanatorium for the Corporation. Specifications of the Borough Surveyor, Town Hall.

FEBRUARY 23.—**Buckie.**—HOUSE.—Various trades for erection of house at Pringle-street, Buckie, for Mr. A. Cowie. Specifications of the architect, Mr. W. Hendry, 91, West Church-street, Buckie.

FEBRUARY 23.—**Cowling.**—SCHOOL ADDITIONS.—Erection of a new cloakroom, drainage, and conversion of closets at Cowling Council School for the West Riding Education Department. Quantities of Mr. B. Thornton, Divisional Clerk, Education Offices, Skipton.

FEBRUARY 23.—**Gleneaskey.**—SCHOOL.—Erection and furnishing of National School Buildings at Gleneaskey, Co. Sligo, for Board of Public Works. Specification at Dromore West R.I.C. Barracks, Easkey, Co. Sligo.

FEBRUARY 23.—**Huddersfield.**—STABLES.—For erection of additions to stables, Halifax Old-road, for the Hillhouse P.P. & Industrial Society Ltd. Messrs. J. H. Hall & Son, architects, Exchange, Huddersfield.

FEBRUARY 23.—**Northwich.**—HOUSES.—Building of six dwelling-houses, to be erected by the R.D.C., under the Housing Acts, at Eddisbury, near to Delamere Station. Specifications of Mr. E. T. Ward, Brockhurst-street, Northwich.

FEBRUARY 23.—**Rhondda.**—OFFICE.—Supply and erection of temporary office premises for the accountant's department at Ystrad-road, Ystrad, for the Rhondda U.D.C. Specifications at the Council Offices, Pentre. Deposit, £1 1s.

FEBRUARY 23.—**Whitley.**—CONVENIENCES.—Construction of convenience at side of Council's offices and enlargement of convenience in Watts-road for the Whitley and Monkseaton U.D.C. Quantities of Mr. A. J. Rousell, Surveyor, Council Offices, Whitley Bay.

FEBRUARY 24.—**Belfast.**—ADDITIONS, ETC.—Carrying out the following works for B.G.:—New sanitary annexe, convalescent department, washhand basins, Kerr's buildings, new accommodation stores, etc., at female department and lavatories at male infirm department, in accordance with the plans and specifications prepared by Messrs. Young & Mackenzie, architects and engineers, Belfast. Quantities from Mr. Acheson Ferguson, surveyor, Scottish Provident Buildings, Belfast. Deposit, £1 1s.

FEBRUARY 24.—**Brownstown.**—SCHOOL.—Tenders invited by Rev. A. Fenelon, Suncroft, Curragh Camp, Co. Kildare, for the erection of schools at Brownstown. Quantities, prepared by Messrs. Morris & Kavanagh, 53, Harcourt-street, Dublin, to be obtained from the Rev. A. Fenelon.

FEBRUARY 24.—**Darton.**—HOUSES.—Erection of three houses, Sackup-lane, Darton. Quantities of Messrs. R. & W. Dixon, Licentiates R.I.B.A., architects, 5, Eastgate, Barnsley.

FEBRUARY 25.—**Cudworth.**—HOUSES.—The Cudworth U.D.C. invite tenders for the various works in connection with the erection of houses under their housing scheme. Quantities from Mr. W. T. Lynam, Surveyor, Council Offices, Cudworth. Deposit, £1 1s.

FEBRUARY 25.—**Fochabers.**—HOUSE.—Various trades in erection of new dwelling-house at Fochabers. Specifications at the Estates Office, Fochabers.

FEBRUARY 25.—**Hull.**—BRIDGE.—Extension of the bridge carrying Cottingham-road over Cottingham Drain for the Corporation. Particulars at the City Engineer's Office.

* FEBRUARY 25.—**Lancing.**—PARISH HALL.—The Lancing P.C. invite tenders for erection of a parish hall.

FEBRUARY 25.—**Manchester.**—SANATORIUM BUILDINGS.—Erection of males' and females' pavilions at Baguley Sanatorium for the Corporation. Quantities of the City Architect, Town Hall. Deposit, £2 2s.

FEBRUARY 25.—**Taunton.**—ALTERATIONS.—Alterations at the pavilion at the Vivary Park for the T.C. Specification of Mr. D. Edwards, A.M.Inst.C.E., Borough Surveyor, Municipal Buildings, Taunton.

FEBRUARY 25.—**Wetherby.**—ENGINE-HOUSE, ETC.—Construction of brick engine-house and water tower, together with the several works connected therewith, at Walton Head, near Pannal, for the Wetherby R.D.C. Quantities, etc., of the Engineer, Mr. H. A. Johnson, M.Inst.C.E., 15, The Exchange, Bradford. Deposit, £1 1s.

FEBRUARY 26.—**Bermondsey.**—REPAIRS.—Repairing the corrugated-iron dining-hall at the Workhouse, Tanner-street, Bermondsey, S.E., according to the specification of Messrs. Newman & Newman, architects and surveyors, for the B.G. Specification (by February 20) of Mr. E. Pitts Fenton, Clerk, 283, Tooley-street, S.E. Deposit, £5.

FEBRUARY 26.—**Cwmaman.**—HOUSE.—Erection of a house at Cwmaman for Mrs. Wilson. Specification of Mr. J. Llewellin Smith, Licentiate R.I.B.A., Aberdare.

FEBRUARY 26.—**Cwmaman.**—VILLAS.—Erection of eighteen semi-detached villas at Cwmaman for the Penybryn Building Club. Specifications of Mr. J. Llewellin Smith, Licentiate R.I.B.A., Aberdare.

FEBRUARY 26.—**Lutterworth.**—HOUSES.—Erection, etc., of twenty-three houses at Lutterworth for the Lutterworth R.D.C. Quantities of the Council's Surveyor, Mr. A. J. Ross, Lutterworth.

FEBRUARY 27.—**Barton-upon-Irwell.**—BUILDINGS.—Erection of cartshed, office, mortuary, and store-room at Croft's Bank, Davyhulme, for the Barton R.D.C. Specifications, etc., from Mr. Mountain, A.M.Inst.C.E. Surveyor to the Council, Union Offices, Green-lane, Patricroft.

FEBRUARY 27.—**Llandaff.**—RESIDENCE.—Erection and completion of a residence at Llandaff. Quantities, etc., of Messrs. Arthur Ll. Thomas & Gomer S. Morgan, architects, 23, Gelliwastad-road, Pontypridd. Deposit, £2 2s.

FEBRUARY 28.—**Braunton.**—PREMISES.—Erection of new premises at Cross Tree, Braunton, for Messrs. F. Row & Co. Specifications of the architect, Mr. G. S. Schwabe.

FEBRUARY 28.—**Brockenhurst.**—SCHOOL WORKS.—Concrete foundations, fencing, work to playgrounds, and other small works in connection with proposed Pupil Teachers' Centre, Brockenhurst. Specification at the office of Mr. A. L. Roberts, Architect to the Education Committee, The Castle, Winchester. Deposit, £2 2s.

FEBRUARY 28.—**Carlisle.**—OFFICE, ETC.—Erection of an office and convenience at the Sands Cattle Market for the Corporation. Quantities of Mr. Henry C. Marks, M.Inst.C.E., City Engineer and Surveyor, 36, Fisher-street, Carlisle. Deposit, 10s. 6d.

FEBRUARY 28.—**Clacton-on-Sea.**—ALTERATIONS.—Alterations and additions to the Police-station, Clacton-on-Sea, for the Standing Joint Committee of Essex. Specification, etc., of the County Architect, Mr. F. Whitmore, Duke-street, Chelmsford.

FEBRUARY 28.—**Dunmow.**—ALTERATIONS, ETC.—Alterations and painting, etc., at cottages rear of Police-station, Dunmow, for the Standing Joint Committee of Essex. Specification, etc., of the County Architect, Mr. F. Whitmore, Duke-street, Chelmsford.

FEBRUARY 28.—**Leicester.**—CHIMNEY SHAFT.—Erection of an octagonal brick chimney shaft, 212 ft. high, on the site of the Generating Station, "The Lero," for the Corporation. Quantities, etc., of Mr. E. George Mawbey, M.Inst.C.E., Borough Engineer and Surveyor, Town Hall, Leicester. Deposit, £2.

FEBRUARY 28.—**Lower Stondon.**—Erection of villa residence. Particulars of Mr. J. Parrott, Lower Stondon Farm, Bedfordshire.

* FEBRUARY 28.—**Norbury.**—COTTAGES.—The L.C.C. invite tenders for the erection of a block of cottages.

FEBRUARY 28.—**Par.**—CHINA CLAY DRIES.—Erection of two china clay dries, together with tanks and other works, at Par, Cornwall, for the Great Treverbyn and Ruddle Common China Clay Companies, Ltd. Specification at the Engineer's Offices, Central-chambers, Newquay, Cornwall, or at the offices of Messrs. John Andrews & Read, 13, Basinghall-street, London, E.C. Deposit, £3 3s.

FEBRUARY 28.—**Peterborough.**—ALTERATIONS.—For alterations for nurses' apartment at St. Ives Union. Specification of the Clerk, Union Offices, St. Ives, Hunts.

FEBRUARY 28.—**Poplar.**—PLASTERING.—Plastering work in the T., U., and V. Wards of the Sick Asylum, Devon's-road, Bow, London, E., for the Managers of the Poplar and Stepney Sick Asylum District. Forms of tender of Mr. Sydney G. Wright, Clerk, Devon's-road, Bow, London, E.

FEBRUARY 28.—**Romford.**—FIRE-STATION.—Erection of an addition to building in Heath-drive, Romford, together with other works, for the conversion of the premises into a fire-station for the U.D.C. Specifications, etc., of Mr. Herbert T. Ridge, Acting Surveyor, at the Council Offices, Market-place, Romford.

FEBRUARY 28.—**Southampton.**—REPAIRS, ETC.—Exterior painting and general repairs to nine houses, Brunswick-place, Southampton, for the trustees of Wulfris Charity. Mr. William Burrough Hill, surveyor, 93, Above Bar, Southampton.

MARCH 2.—**Naas.**—ARTISANS' DWELLINGS.—Erection of six artisans' dwellings in Naas, adjoining the G.S. & W. Railway-station, on the Dublin road, laying out of site, the construction of sewer, manholes, and other works in accordance with plans and specification prepared by Mr. R. H. Hall, A.M.Inst.C.E.I., Surveyor to Naas U.D.C., from whom quantities can be obtained.

MARCH 2.—**Nantwich.**—CONVENIENCE.—Construction of an underground sanitary convenience for the U.D.C. Specifications of the Engineer and Surveyor, Mr. W. F. Newey, Council Offices, 26, Pepper-street, Nantwich.

MARCH 3.—**Toomore.**—SCHOOL.—Erection, furnishing, and enclosing of National School Buildings at Toomore, Co. Mayo, for Board of Public Works. Mr. R. Williams, Secretary, Office of Public Works, Dublin.

MARCH 4.—**Ashbourne.**—OFFICES, ETC.—Taking down of old buildings at the back of the boardroom in Compton-street, Ashbourne, and the erection of offices and stores for the B.G. Specification from either Mr. John Twemlow, surveyor, Green-road, Ashbourne, or Mr. Luther Adams, surveyor, Stanton, Ashbourne.

MARCH 4.—**Upton-on-Severn.**—COTTAGES.—Erection of two pairs of cottages at Castlemorton for the Upton-on-Severn R.D.C. Specifications of Mr. T. W. Holds, architect, Lyttleton House, Malvern.

MARCH 6.—**Saddleworth Friezland.**—SCHOOL.—Erection of Saddleworth Friezland new school for the West Riding C.C. Quantities of the Education Architect, County Hall, Wakefield. Deposit, £1.

[Those with an asterisk (*) are advertised in this issue.]

BUILDING—*continued.*

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

* MARCH 7.—**Denbigh.**—SANITARY ANNEX.—The N. Wales Lunatic Asylum Committee invite tenders for the erection of sanitary annex.

* MARCH 9.—**Basingstoke.**—ELECTRIC GENERATING-STATION.—The Basingstoke B.C. invite tenders for the erection of an electric generating-station.

* MARCH 9. — **Dunbar.** — RECEPTION STATION.—The Secretary of State for War invites tenders for erection of a new reception station.

* MARCH 9.—**Nottingham.**—CHILDREN'S HOME, ETC.—The Nottingham Guardians invite tenders for the erection of a children's home, etc.

MARCH 10.—**Bishop's Castle.**—MARKET ALTERATIONS.—Additions and alterations to Smithfield, including erection of cattle pens, etc., buildings, paving, etc. Particulars of the Borough Surveyor, 30, High-street, Bishop's Castle.

* MARCH 11.—**Whittington Heath.**—OFFICERS' MESS.—The Secretary of State for War invites tenders for the erection of officers' mess at Whittington Heath Barracks.

* MARCH 12.—**St. George's-in-the-East.**—SANITARY TOWER.—The Guardians of St. George's-in-the-East invite tenders for erection of a sanitary tower.

* MARCH 13.—**Bicester.**—NEW POST-OFFICE.—The Commissioners of H.M. Works and Public Buildings invite tenders for erection of a new post-office.

MARCH 26.—**Knockcroghery.**—STORE. — Building of a goods store at Knockcroghery Station for the Midland Great Western Railway of Ireland Company. Specifications of Mr. Wm. Purcell O'Neill, Chief Engineer, Broadstone Terminus, Dublin. Charge, 2s. 6d.

* MARCH 26. — **Rochford.** — POLICE-STATION. — The Essex Standing Joint Committee invite tenders for erection of a police-station.

* MARCH 31.—**Swansea.**—MASONRY AND CONCRETE APPROACHES, ETC.—The Swansea Corporation invite tenders for construction of masonry and concrete approaches, piers, etc., for a steel girder bridge.

No DATE. — **Coventry.** — REBUILDING. — For rebuilding of premises in Derby-lane. Particulars of Mr. H. W. Chattamay, Trinity Churchyard, Coventry.

No DATE.—**Harrogate.**—ADDITIONS.—Various works in connection with extensive additions and alterations at the Convent of the H.C.J., Harrogate. Also for a church in the Huddersfield district. Plans, etc., of both works at the offices of the architect, Mr. W. H. Herbert Marten, Licentiate R.I.B.A., 3, Cookridge-street, Leeds.

No DATE. — **Manchester.** — WATER TOWER. — Reinforced concrete water tower at the Withington Workhouse for the South Manchester B.G. Specification of Mr. F. H. Overmann, F.M.S.A., 49, King-street, Manchester. Deposit, £25.

No DATE. — **Penrith.** — ALTERATIONS.—Making considerable additions and alterations to the farm school for the Cumberland and Westmorland Joint Agricultural Committee. Quantities of Mr. G. Dale Oliver, F.R.I.B.A., County Architect, Carlisle.

No DATE.—**Pickering.**—PREMISES.—Erection of new premises at Pickering for the Pickering Co-operative Society. Quantities of the architect, L. G. Ekins, C.W.S., Ltd., West Blandford-street, Newcastle-on-Tyne.

No DATE.—**St. Boswells.**—HOUSES.—Erection of four houses for five steadings on Harrietsfield Farm, St. Boswells, for smallholders. Particulars from the Chief Surveyor to the Board of Agriculture for Scotland, 29, St. Andrew's-square, Edinburgh.

No DATE. — **Slaithwaite.** — PICTURE PALACE.—Erection of a picture theatre at Kiln-hill, Slaithwaite. Names to Mr. B. H. F. Walker, Croft House, Slaithwaite.

No DATE.—**Towyn.**—HOUSE.—House at Towyn for Mr. H. Haydn-Jones, M.P. Particulars of the architects, Messrs. Deakin & Howard-Jones, M.S.A., Plas Ynys, Borth, R.S.O.

No DATE. — **West Stanley.**—SHOPS.—Erection of pair of lock-up shops, Scott-street, West Stanley, for Mr. M. M. Hobson. Mr. H. Adamson Curry, architect, 3, Bigg Market, Newcastle-on-Tyne.

ENGINEERING, IRON, AND STEEL.

FEBRUARY 23.—**Bala.**—GASHOLDER.—Construction of top lift for gasholder, 28 ft. by 10 ft. deep, with guide framing, for the Bala U.D.C. Specification from the Council's Consulting Engineer, Mr. R. Bruce Anderson, of 5, Westminster-chambers, London, S.W. Charge, 10s.

FEBRUARY 23.—**Ruislip.**—FENCING.—Supply and erection of about 700 yds. unclimbable wrought-iron railings and about 646 yds. wire fencing in connection with the new cemetery, recreation ground, and allotments at Northwood, Middlesex, for the Ruislip-Northwood U.D.C. Specification of the Surveyor, Council Offices, Northwood, Middlesex.

FEBRUARY 24. — **Birkenhead.** — ELECTRICITY MATERIAL. — Supply of (1) continuous current electricity meters (ordinary and prepayment); (2) house service fuse boxes, for the Corporation. Specifications of the Borough Electrical Engineer, Mr. G. P. Shallcross, Corporation Electricity Works, Craven-street, Birkenhead. Deposit, £1 1s. each section.

FEBRUARY 24. — **Deptford.** — RAISING WATER-TANK.—Raising a water-tank of 20,000 gallons capacity 15 ft. above the present height at the Baths and Washhouses, Laurie-grove, New Cross for the Deptford B.C. Particulars from the Borough Surveyor, Town Hall, New Cross-road, S.E.

FEBRUARY 24.—**Sheerness.**—CORRUGATED-IRON FENCING.—Supply and fixing of about 108 yds. run of corrugated sheet fencing, 6 ft. high above ground, etc., for the U.D.C. Particulars from the Surveyor to the Council, Mr. Thos. F. Berry, Council Offices, Trinity-road, Sheerness.

FEBRUARY 24.—**Shipley.**—STEEL GIRDER TRAM RAILS.—Supply of steel girder tram rails and fishplates for the U.D.C. Specification of Mr. W. H. Dawson, Engineer to the Council, Manor House, Shipley.

FEBRUARY 24.—**Wembley.** — SEATS. — Specifications, designs, and prices for cast-iron or cast-iron and wood seats for the U.D.C. Mr. Cecil R. W. Chapman, Engineer and Surveyor, Public Offices, Wembley.

FEBRUARY 25. — **Clonmel.** — GASWORKS. — Erection of four setting of seven retorts each, on foundations to be provided at the Gasworks in Clonmel, for the Corporation, and the erection of the necessary ironwork in retort-house roof, stage floor, and retort settings. Specification from the Engineer, Mr. Henry O'Connor, A.M.Inst.C.E., 1, Drummond-place, Edinburgh. Deposit, £1 1s.

FEBRUARY 25.—**Ipswich.**—BOILER.—Lancashire type boiler at the Ipswich Workhouse, Woodbridge-road, Ipswich, 7 ft. 6 in. diameter by 30 ft. long, complete with all necessary fittings, firing tools, etc., for daily working pressure of 60 lb. per square inch. Alternative tenders also for a boiler to work 120 lb. per square inch, for the Ipswich Board of Guardians. Mr. L. W. Greenhalgh, Guardians' Offices, 19, Tower-street, Ipswich.

FEBRUARY 26.—**Arnold.**—WROUGHT-IRON FENCING.—Supply and erection of about 700 yds. of wrought-iron fencing, and two pairs of entrance gates for recreation ground of Arnold U.D.C. Specifications of Mr. R. E. Clark, Surveyor, Public Offices, Arnold.

* FEBRUARY 26.—**Bermondsey.**—REPAIRING IRON DINING HALL.—The Bermondsey Guardians invite tenders for repairing a corrugated-iron dining hall.

FEBRUARY 27.—**London.**—ELECTRIC CONDUIT, ETC.—Supply of electric conduit and fittings during a period of three years, from May 1, 1914, for the Commissioners of H.M. Works. Forms of tender of the Storekeeper, H.M. Office of Works Stores, 12, Lambeth Palace-road, London, S.E.

FEBRUARY 28.—**Edinburgh.**—ELECTRIC INSTALLATION.—Electric lighting installation at the South Gray's Close and Fountainbridge Workhouses for the Corporation. Specification at the Engineer's Office, Dewar-place, Edinburgh. Deposit, £1 1s.

FEBRUARY 28. — **Maidstone.** — PETROL MOTOR LORRIES.—Six petrol-driven motor lorries. The bodies to be constructed of steel, with end-tipping gear, and capable of carrying a load of 5 cubic yds., for the Kent C.C. Specification of the County Surveyor, Maidstone.

FEBRUARY 28. — **Matlock.** — BRIDGES.—Supply and erection of steel bridges over the River Derwent, to carry steel tube sewers, for the U.D.C. Particulars of Messrs. J. Diggle & Son, engineers, 14, Victoria-street, Westminster, S.W. Deposit, £2.

FEBRUARY 28. — **Portknockie.** — HARBOUR WORKS.—Construction of concrete piers, the excavation of rock and other material, and the execution of other works in connection with the improvement and extension of the harbour at Portknockie, in the County of Banff. Specification of the Town Clerk, Bank of Scotland-buildings, Buckie, Banffshire, or at the office of Mr. A. W. Lewis, M.Inst.C.E., 15, Victoria-street, Westminster, London, S.W. Deposit, £1.

MARCH 2. — **Margate.** — CLINKER-CRUSHING PLANT.—Supply to the Corporation of clinker-crushing plant, without engine, capable of dealing with 2 tons per hour. Particulars of Mr. E. A. Borg, Borough Engineer, 13, Grosvenor-place, Margate.

MARCH 2. — **Margate.** — FENCING. — About 573 yds. of wrought-iron fencing and entrance gates for Corporation. Specification of Mr. E. A. Borg, Borough Surveyor, 13, Grosvenor-place, Margate.

MARCH 3. — **Shoreditch.**—SWITCHGEAR.—Extra high-tension and low-tension switchgear for the B.C. Specification of Mr. C. Newton Russell, Borough Electrical Engineer, Shoreditch Electricity Department, Coronet-street, Shoreditch, N. Deposit, £2 2s.

MARCH 4. — **Salford.** — SWITCHBOARD.—Supply and erection of main traction switchboard for the Corporation. Specification, etc., from Borough Electrical Engineer, Electricity Works, Frederick-road, Pendleton. Deposit, £2 2s.

MARCH 5.—**Danbury.**—PUMPING MACHINERY.—Supply of one horizontal high-compression crude oil engine of the Semi-Diesel type, and one vertical treble ram pump of 5,000 gallons per hour capacity, complete with other incidental work, for the Chelmsford R.D.C. Specification of Mr. James Dewhirst, A.M.Inst.M.E., Council's Engineer, Waterloo-lane, Chelmsford. Deposit, £1.

MARCH 7.—**Bedford.**—PUMPING PLANT.—Provision and erection of four sets of steam-engines and centrifugal pumps, together with all necessary pipework, in connection with the main drainage scheme, for the Corporation. Specification of the engineers, Major Tulloch & Haworth, No. 28, Victoria-street, Westminster, London, S.W. Deposit, £5.

MARCH 26. — **New Zealand.**—POWER PLANT.—For (1) hydraulic equipment, including turbines, 1,500 h.p. each, governors, penstocks, valves, etc.; (2) generators, 1,000 k.w. each, exciters, automatic regulators, etc., for the Dominion Portland Cement Company, Ltd., New Zealand. Specifications of Messrs. Walker MacEwen & Co., Ltd., 7, Princes-street, Westminster, S.W. Deposit, £2 2s.

NO DATE.—**Alfreton.**—RAILWAY CUTTING.—For making railway cutting. Particulars of General Manager, Swanwick Collieries, Alfreton, Derbyshire.

NO DATE. — **Johannesburg.** — WEIGHING MACHINES—Supply of about fifty weighing machines, to have a weighing capacity of 200 lb. rising in 10 lb. to 250 lb., with platform, minimum dimensions 12 in. by 16 in. Prices to Middelburg Coal Agency (Amoils Bros.), P.O. Box 4,808 Johannesburg, Transvaal.

NO DATE.—**Tooting.**—HEATING.—Schemes and estimates for low-pressure hot-water heating for the primary hall, girls' and boys' clubrooms, Fairlight Hall, Tooting. Specification of Mr. W. E. Johnson, architect, Fairlight Hall, Tooting. Deposit, £1 1s.

FURNITURE, PAINTING, MATERIALS, etc.

FEBRUARY 23.—**Hindley.**—MATERIALS.—Supply for year to the U.D.C. of Portland cement, granite setts, kerbs, flags, and grit setts, broken granite and limestone chippings, ironmongery, sanitary pipes, etc. Specification from Mr. Oswald P. Abbott, Surveyor to the Council.

FEBRUARY 23. — **Kingston-on-Thames.** — MATERIALS.—For supply to Guardians of the Kingston Union of ironmongery, builders', plumbers', and ironmongers' materials, etc. Forms of tender of Mr. Chas. W. Dash, Clerk to the Guardians, Union Offices, Coombe-road, Kingston-on-Thames.

FEBRUARY 23. — **Pontypridd.** — PAINTING. — Painting the interior and exterior of the Municipal-buildings, Pontypridd, for the U.D.C. Specification of Mr. W. E. Lowe, the Surveyor, Municipal-buildings, Pontypridd. Deposit, £1 1s.

FEBRUARY 23.—**Poole.**—MATERIALS.—For gravel, grey grit for tarred roads, kerbing and paving, cement, etc., for the Corporation. Mr. S. J. Newman, F.R.I.B.A., Borough Surveyor, Poole.

FEBRUARY 23.—**Salford.**—STORES.—Two years' supply of miscellaneous stores, etc., for the Salford Corporation Tramways. General Manager, 32, Blackfriars-street, Salford.

FEBRUARY 24.—**Barking.**—MATERIALS.—Supply to the U.D.C. of tools, implements, and general ironmongery; broken and crushed Guernsey granite and Kentish pit flints; glazed stoneware goods; Portland cement, bricks, sand, ballast, etc.; oil and colourman's goods, etc. Forms of tender at the Clerk's Office, Public Offices, Barking. Deposit, 10s. 6d. for each schedule.

FEBRUARY 24.—**Belfast.**—CEMENT, ETC.—Supply for one year to the T.C. of Portland cement and mill furnishings. Forms of tender of the City Surveyor, City Hall, Belfast.

FEBRUARY 24.—**Leyton.**—MATERIALS.—Supply to U.D.C. of road materials, stoneware pipes, junctions, gully pots, etc., sewerage ironwork, press cloth, lime and cement, oils and engineers' sundries, etc. Forms of tender of Mr. Ernest H. Essex, A.M.Inst.C.E., Surveyor to the Council, Town Hall, Leyton, E.

FEBRUARY 24.—**Richmond.**—PAINTING.—(1) The iron railings, gates, etc., at the cemetery, Grove-road; (2) the iron railing, gates, etc., at the North Sheen Recreation Ground, for the Corporation. Specification, etc., of Mr. J. H. Brierley, Borough Surveyor, Town Hall, Richmond, Surrey. Deposit, £1 1s.

FEBRUARY 24.—**Southall-Norwood.**—MATERIALS. —Supply for one year to the U.D.C. of granite (Guernsey and Leicestershire), lime (Clay Cross and grey lime), cement, aluminoferric, tools, etc., flints, hoggin, and gravel, steam rolling and scarifying. Forms of tender of Mr. Reginald Brown, Town Hall, Southall.

FEBRUARY 24.—**Wakefield.**—PAINTING.—Outside painting of the Acute Hospital and other buildings. Specifications from Mr. W. E. H. Burton, A.M.Inst.C.E., Architect to the Asylums Board, West Riding Asylum, Wakefield.

FEBRUARY 24.—**Woodford.**—MATERIALS.—Supply to the U.D.C. of small granite and granite chippings, tar, pitch, and creosote oil. Forms of tender of Mr. William Farrington, Surveyor, Council Offices, Woodford Green.

FEBRUARY 25.—**Banbury.**—ROAD MATERIAL.—Supply of Hartshill stones for the Farnborough R.D.C. Mr. Arthur Fairfax, Clerk to the Council, Banbury.

FEBRUARY 25.—**Exeter.**—SCHOOL FURNITURE.—Supply of furniture for the schools of the Devon C.C. Particulars of the Secretary, The Castle, Exeter.

FEBRUARY 25. — **Fleetwood.**—MATERIALS.—For Haslingden stone kerbs, channels, and flags, limestone macadam, lonkey and grit stone setts, pitch, creosote oil and tar, sewer pipes and bricks, and Welsh granite macadam, for the U.D.C. Forms of tender of Mr. A. Cottam, Clerk, Town Hall, Fleetwood.

FEBRUARY 25.—**Hampton.**—MATERIALS.—Supply to U.D.C. of hand-broken granite, granite chippings, broken Kentish brown flints, Derbyshire limestone marble tar-paving material, etc. Forms of tender of Mr. Sidney H. Chambers, Surveyor, Public Offices, Hampton, Middlesex.

FEBRUARY 25.—**Hull.**—STONE.—Supply of about 8,000 tons of stone for macadamising during the twelve months commencing April 1, 1914, for the Corporation. Form of tender at the City Engineer's Office.

FEBRUARY 25. — **London.** — METAL WARE. — Separate tenders for the supply of:—(1) Miscellaneous metal ware; (2) cast-iron hollow ware; (3) wrought-iron hollow ware; (4) cutlery; (5) curbs, fenders, etc.; (6) enamelled ware; (7) fireguards and wirework; (8) tin and sheet metal ware, during a period of three years, from April 1, 1914, for the Commissioners of H.M. Works. Forms of tender of the Storekeeper, H.M. Office of Works Stores, 12, Lambeth Palace-road, London, S.E.

[Those with an asterisk (*) are advertised in this issue.]

FURNITURE, etc.—*continued.*

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in.

FEBRUARY 25.—**Newchurch.**—PAINTING.—For painting the Bethesda United Methodist School and the outside of the school and chapel, Newchurch. Particulars of Mr. T. R. Stephenson, 145, Burnley-road, Waterfoot.

FEBRUARY 25.—**Sunderland.**—Year's supply of all kinds of materials required by various departments of the Corporation. Specifications of Borough Engineer.

FEBRUARY 25.—**Walthamstow.**—MATERIALS.—Twelve months' supply to the U.D.C. of materials, including road and sanitary materials, cement, oils, etc. Forms of tender of the Surveyor, Town Hall, Walthamstow.

FEBRUARY 25.—**Walthamstow.**—ELECTRICITY AND TRAMWAY STORES.—Supply of cables, jointing materials, electrical fittings and accessories, arc-lamp carbons, electricity meters, ironmongery and tools, lamps, engine-room stores, lubricating oils and grease, castings, car accessories, including steel tyres; paints, varnishes, and brushes. Particulars from Mr. G. R. Spurr, Electrical and Tramways Engineer, the U.D.C. Electricity Works, Priory-avenue, Walthamstow.

FEBRUARY 25.—**Wrexham.**—ROAD MATERIAL, ETC.—Road stone, tar-macadam and tar-topping, Portland cement, hydraulic lime, setts, and drain pipes for the Denbighshire C.C. Particulars of Mr. Ellis W. Jones, County Surveyor, Eastern Division, Wrexham.

FEBRUARY 25.—**Wrexham.**—MATERIALS.—Macadam, setts, kerbs, channels and flags; tiles, pipes, gullies; cement, lime; tar, tools and ironmongery, oils and paints, sanitary materials, etc. for Wrexham Corporation. Forms of tender of the Borough Surveyor, Wrexham.

FEBRUARY 26.—**Brandon.**—MATERIALS.—Execution of works and supply of materials for the year ending March 31, 1915, as follows:—Form A, scavenging; Form B, road stone, flags, tools, stores, etc., for the Brandon and Byshottles U.D.C. Forms of tender of the Council's Surveyor, Langley Moor, Durham.

FEBRUARY 26.—**Islington.**—MATERIALS, ETC.—Annual contracts for the B.C. for masons' and paviors' work; supply of road materials, timber, manhole and other covers, gully grates, guard posts, castings, etc.; iron, steel, and tools; Portland cement and lime; stoneware pipes, bends, etc. Particulars at the Town Hall, Upper-street, N.

FEBRUARY 26.—**Leeds.**—MATERIALS.—Year's supply of cement, earthenware drain pipes, etc., sewer ironwork, galvanised dirt boxes, and sewer ventilating columns, for the Corporation. Forms of tender of Mr. W. T. Lancashire, City Engineer, Municipal-buildings, Leeds.

FEBRUARY 26.—**Sowerby Bridge.**—GAS MATERIALS.—Twelve months' supply of materials to gas department of the Sowerby Bridge U.D.C. Also tenders for old scrap iron and brass. Specifications of Mr. A. W. Bissell, Engineer, Gasworks, Sowerby Bridge.

FEBRUARY 27.—**Ashington.**—ROAD MATERIAL.—Supply of 2½-in. hand-broken whinstone, for year ending March 31, 1915, for the U.D.C. Mr. George Beaty, Surveyor to the Council, Council Offices, Ashington.

FEBRUARY 27.—**Bedwas.**—STONE.—Supply of broken limestone for the year ending March 31, 1915, for the Bedwas and Machen U.D.C. Specification of Mr. A. S. V. Taylor, Surveyor, Surveyor's Office, Bedwas, Mon.

FEBRUARY 27.—**Merton.**—MATERIALS.—Supply to the U.D.C. of flints, gravel, and ballast, tar-paving, Portland cement, stoneware pipes, tools, sewerage ironwork, broken granite, tar, etc. Forms of tender of Mr. C. J. Mountfield, Clerk, District Council Offices, Kingston-road, Merton.

FEBRUARY 26.—**Beverley.**—STONE.—Supply of about 7,000 tons of stone for macadamising the main roads, for the East Riding C.C. Forms of tender of the County Surveyor, Beverley.

FEBRUARY 26.—**Newton-in-Makerfield.**—SUPPLIES.—For tubes, water appliances, oil, gas appliances, fireclay, road material, etc., for the U.D.C. Forms of tender from the Stores Clerk, Gasworks, Earlestown.

FEBRUARY 28.—**Wood Green.**—MATERIALS, ETC.—Supply of materials, etc., for the U.D.C. Forms of tender of Mr. Wm. P. Harding, Clerk, Town Hall, Wood Green.

MARCH 2.—**Colchester.**—STORES.—Ironmongery and tools, oilman's sundries, and castings, for the Electricity Committee of the Corporation. Forms of tender of Mr. Wm. Frisby, A.M.Inst.E.E., Borough Electrical Engineer, 36, Osborne-street.

MARCH 2.—**Ealing.**—MATERIALS.—Supply to the Corporation for twelve months of limes, pipes, etc., cement, ironmongery, iron castings, paints, oils, etc., granite, harness repairs, etc., wood paving repairs, slab-laying, etc. Forms of tender of the Borough Surveyor, Mr. W. R. Hicks, A.M.Inst.C.E., Town Hall, Ealing, W.

MARCH 2.—**Margate.**—MATERIALS.—Supply for one year to the Corporation of materials, including road material, paving, and sanitary apparatus, etc. Mr. E. A. Borg, Borough Engineer.

MARCH 2.—**St. Pancras.**—CARBONS.—Supply of arc-lamp carbons for the B.C. Specification at the Electricity Department Offices, No. 57, Pratt-street, Camden Town, N.W. Deposit, £2.

MARCH 3.—**Manchester.**—STORES.—For supply for six or twelve months to the Great Central Railway Company of materials. Specifications, etc., of Mr. W. Williams, Stores Superintendent, Great Central Station, Gorton, Manchester.

MARCH 4.—**Barrow-in-Furness.**—MATERIALS.—Twelve months' supply of stores and materials for the Corporation. Forms of tender of the Borough Engineer, Town Hall.

MARCH 4.—**Salford.**—ELECTRICITY STORES.—Supply of stores, etc., to Electricity Department of the Corporation. Information from Electrical Engineer, Electricity Works, Frederick-road, Pendleton.

MARCH 5.—**Bedwas.**—STORES.—Year's supply of stores, including iron and steel goods, electrical goods, ironmongery, paints, lime, cement, etc., for the Bedwas Navigation Colliery Company, Ltd. Forms of tender of the Secretary.

MARCH 7.—**Derby.**—SCHOOL FURNITURE.—Supply of school furniture to the elementary schools under control of Derbyshire C.C. Specifications of Mr. A. L. Jenkyn Brown, Director of Education, County Education Office, Derby.

MARCH 7.—**Swindon.**—MATERIALS.—Twelve months' supply of stone, kerbing, etc., timber, pipes and bricks, cement and lime, oils, paints, glass, and hardware, iron castings and lamp columns, general stores for the Electricity and Tramways Departments of the Corporation. Forms of tender of Mr. H. J. Hamp, Borough Surveyor, Town Hall, Swindon; and for the last item from the Tramway Manager, Mr. T. Medcalf, Electricity Works, Swindon.

MARCH 11.—**Macclesfield.**—STORES.—For one year's supply to the Cheshire County Asylum at Parkside, Macclesfield, of electrical goods, paints, paint brushes, glass, and lime. Forms of tender from Mr. Wm. Tingay, Clerk of Asylum.

MARCH 14.—**Walthamstow.**—PAINTING.—Interior painting, decorating, etc., of branch Asylum, The Chestnuts, Hoe-street, Walthamstow. Specification from Mr. W. H. Roscoe, Clerk of the Asylum, Brentwood.

NO DATE.—**Crewe.**—PAINTING.—Painting and decoration of the Primitive Methodist Church, Ruskin-road, Crewe. Particulars of the Rev. W. Lawrence, 10, Herdman-street, Crewe.

ROAD, SANITARY, AND WATER WORKS.

FEBRUARY 23.—**Bedwellty.**—STREET WORKS.—Private street works in George-street, Aberbargoed, for the Bedwellty U.D.C. Quantities of Mr. Dan. H. Price, Surveyor, Aberbargoed.

FEBRUARY 23.—**Withernsea.**—ROADS.—Works at the New North-road, Withernsea:—(1) For the creosoted fencing; (2) for the excavating and levelling, for the Withernsea U.D.C. Specification of Mr. John Kirton, Engineer, Council Offices, Withernsea. Deposit, £1.

FEBRUARY 24.—**Littleborough.**—STREET WORKS.—For making-up Box-street for the U.D.C. Quantities of the Surveyor, Hare-hill, Littleborough.

FEBRUARY 24.—**Manchester.**—ROADS, ETC.—For macadam roadway, asphalt walks, etc., at the Withington Workhouse for the South Manchester Board of Guardians. Specifications of Mr. F. H. Overmann, F.M.S.A., 49, King-street, Manchester. Deposit, 10s. 6d.

FEBRUARY 24.—**Rhondda.**—SEWERS, ETC.—Laying about 110 yds. of 9-in. and 100 yds. of 6-in. cast-iron pipe sewer at Ferndale; laying about 110 yds. of 9-in. cast-iron pipe sewer at Williamstown; widening of part of Penrhys-road, Tylorstown, and improvement of Enid-street and Evans-terrace, Trealaw (carriageway only) for the U.D.C. Specifications at the Council Offices, Pentre. Deposit, £1 1s. for each contract.

FEBRUARY 24.—**Sevenoaks.**—SEWERAGE WORKS.—For storm-water sewerage work for the Sevenoaks U.D.C. Specification at the office of Mr. S. Towlson, the Surveyor, and forms of tender of Mr. F. W. Tifton, Clerk, Council Offices, Sevenoaks. Deposit, £2 2s.

FEBRUARY 24.—**Southampton.**—STREET WORKS.—Execution of private street works in Charlton-road, for the Corporation. Quantities at the Borough Engineer's Office. Deposit, £1 1s.

FEBRUARY 24.—**Wells.**—WATERWORKS.—Providing and laying about 2¼ miles of 3-in. and 2¼ miles of 2-in. water mains, etc., and for the construction of a circular concrete service reservoir to contain 30,000 gallons, for the R.D.C. Quantities of Mr. Alfred Geo. Russ, Clerk, Poor Law Offices, High-street, Wells. Deposit, £2 2s.

FEBRUARY 24.—**Wembley.**—LODGE, ETC.—Erection of a caretaker's lodge, tool-house, and conveniences at Recreation Ground, Park-lane, Wembley, for the U.D.C. Specification, etc., of Mr. Cecil R. W. Chapman, Engineer and Surveyor, Public Offices, Wembley, Middlesex.

FEBRUARY 25.—**Birmingham.**—DRAINAGE.—Reconstruction of about 115 yds. of the southern wall of the Hockley Brook in Aston Brook-street, for the Corporation. Quantities of Mr. Henry E. Stilgoe, M.Inst.C.E., City Engineer and Surveyor, The Council House, Birmingham. Deposit, £2.

FEBRUARY 25.—**Boldon.**—SEWERAGE.—Scheme of main sewerage for Boldon for the South Shields R.D.C. Particulars of the Engineers, Messrs. D. Balfour & Son, Civil Engineers, 3, St. Nicholas-buildings, Newcastle-on-Tyne. Deposit, £5.

FEBRUARY 25.—**Boldon Colliery.**—SEWERAGE.—Scheme of main sewerage for Boldon Colliery for the South Shields R.D.C. Particulars of the Surveyor at the Council Offices, East Boldon, R.S.O. Deposit, £3.

FEBRUARY 25.—**Brigg.**—SEWERAGE.—Constructing pipe drains, manholes, sewer, etc., at Brigg Workhouse for the Board of Guardians. Specification of Mr. F. C. Hett, Clerk, 11, Bigley-street, Brigg.

FEBRUARY 25.—**Bury.**—SEWER.—About 290 yds. of sewer, proposed to be laid in Ringley-road, Outwood, near to the Outwood Colliery, for the Bury R.D.C. Specifications, etc., of Mr. E. T. Morland Johnson, Bank of England-chambers, Tib-lane, Cross-street, Manchester. Deposit, £2 2s.

FEBRUARY 25.—**Cudworth.**—STREET WORKS.—Street making in connection with housing scheme of the Cudworth U.D.C. Quantities from Mr. W. T. Lynam, Surveyor, Council Offices, Cudworth. Deposit, £1 1s.

FEBRUARY 25.—**Hemsworth.**—ROADS.—Widening and improving of a highway at Moorthorpe, including new culvert, boundary wall, causeway, and macadamising road, for the R.D.C. of Hemsworth. Quantities of Mr. T. H. Richardson, Surveyor, Hemsworth.

FEBRUARY 25.—**Rochester.**—WOOD PAVING.—For laying about 685 super. yds. of creosoted deal paving on single track at Maidstone-road. Specification of Mr. William Banks, A.M.Inst.C.E., City Surveyor, Guildhall, Rochester.

FEBRUARY 25.—**Stalybridge.**—SEWERING.—Execution of sewering and draining works, including the laying of 120 yds. of 9-in. stoneware pipe sewer, with 6-in. stoneware pipe connections, gullies, etc., for the Corporation. Particulars from the Borough Surveyor, Town Hall, Stalybridge. Deposit, £1 1s.

FEBRUARY 26.—**Bath.**—SEWERS.—Construction of stoneware and iron pipe sewers and other appurtenant works; also for making sewer connections to the new intercepting sewers, for the Bath Corporation. Quantities of the Engineer, Mr. W. H. Radford, C.E., Albion-chambers, King-street, Nottingham. Deposit, £2 2s.

FEBRUARY 26.—**Knaresborough.**—SEWERS.—Laying about 297 yds. of 9-in. and 100 yds. of 6-in. stoneware sewers, etc., for the U.D.C. Quantities of the Surveyor, Mr. R. E. Wilson, Knaresborough.

FEBRUARY 26.—**Rodley.**—ROADS.—Road repairs at Rodley Fold, Rodley, near Leeds, for the Farsley U.D.C., Calverley U.D.C. and Mr. M. E. Rouse. Quantities from Messrs. Cowgill & Son, Tanfield-chambers, Piece Hall-yard, Bradford.

FEBRUARY 27.—**Ashington.**—SEWERS.—Construction of new sewers for the Ashington U.D.C. Quantities, etc., of Mr. George Beaty, Surveyor to the Council, Council Offices, Ashington. Deposit £1 1s.

FEBRUARY 27.—**Cannock.**—STREET WORKS.—For kerbing and channelling at Cannock (Staffordshire), for the U.D.C. Quantities of the Council's Engineer and Surveyor, Mr. Robert Blanchard, Council Offices, Church-street, Cannock. Deposit, £2.

FEBRUARY 27.—**Egremont.**—STREET WORKS.—For street works at Egremont, Bigrigg, Scalegill, and Moor-row, Cumberland, for the U.D.C. Quantities of the Surveyor, Mr. James Cowan, Town Hall, Egremont, Cumberland. Deposit, £1 1s.

FEBRUARY 27.—**Linlithgow.**—WATERWORKS.—For constructing a reservoir at Beecraigs, along with sand filters, clear-water tank, pipe tracks, and other accompanying works, for the Linlithgow C.C. Quantities, etc., of the Engineers, Messrs. J. & A. Leslie & Reid, C.E., 72a, George-street Edinburgh. Deposit, £1.

FEBRUARY 27.—**London.**—ROADS.—Watering the roads, etc., in St. James's, the Green, and Hyde Parks, and Kensington Gardens, during a period of three years from April 1, 1914, for the Commissioners of his Majesty's Works. Particulars of the Superintendent, Superintendent's Lodge, Hyde Park, London, W.

FEBRUARY 27.—**Merton.**—ROADS.—Surfacing about 4,000 sq. yds. of the carriageway in Kingston-road, Merton, with bituminous macadam or other approved waterproof material, and for maintaining same, for the U.D.C. Specification of Mr. G. Jerram, Engineer and Surveyor, Council Offices, Kingston-road, Merton.

FEBRUARY 27.—**Skipton.**—WATERWORKS.—For laying pipes, constructing reservoir, etc., for the R.D.C. Quantities of Mr. A. Rodwell, Engineer, Gargreve-road, Skipton. Deposit, £2 2s.

FEBRUARY 28.—**Burntisland.**—DRAINAGE.—Excavating tracks and laying 988 yds. of 9-in. and 12-in fireclay pipes for drainage of Lochies and Bentfield for the Corporation. Schedules from Mr. J. A. Waddell, Burgh Surveyor.

FEBRUARY 28.—**Chesterfield.**—DRAIN.—Laying drain in Newbold-road for the Corporation. Quantities of the Borough Surveyor, Chesterfield.

FEBRUARY 28.—**Southport.**—ROADS.—For making-up of Brocklebank-road (48 ft. wide), 350 yds. in length, on the Hesketh Estate, Southport. Quantities, etc., of Mr. G. E. Gregson, F.S.I., Surveyor, 11, Chapel-street, Preston. Deposit, £1 1s.

FEBRUARY 28.—**Taunton.**—STREET WORKS.—Street improvement works in the following streets:—(1) Florence-road and (2) unnamed street off Winchester-street for the T.C. Quantities of Mr. D. Edwards, A.M.Inst.C.E., Borough Surveyor.

FEBRUARY 28.—**Tynemouth.**—ROAD.—Constructing a macadam road at Low Lights, North Shields, for Corporation. Specification, etc., of Mr. John F. Smillie, Borough Surveyor, Tynemouth.

MARCH 2.—**Chertsey.**—STREET WORKS.—Making-up and draining, etc., the following private streets, viz.:—Aviary-road, Pyrford; Binfield-road, Byfleet; King's Head-road, Byfleet; York-road (part of), Byfleet, for the Chertsey R.D.C. Particulars at the Surveyor's Office, West Byfleet.

MARCH 2.—**Kendal.**—SEWERS.—For concrete work in connection with the extension of sewage disposal works of the Corporation. Quantities of Mr. F. W. Oxberry, Borough Engineer, Town Hall.

MARCH 2.—**Margate.**—WATER MAIN.—Laying, etc., about 1,900 yds. of 8-in. water main for the Corporation. Particulars of Mr. Stanley, Water Works Manager, 13, Grosvenor-place, Margate.

[Those with an asterisk (*) are advertised in this issue.]

ROADS, etc.—*continued*

The date given at the commencement of each paragraph is the latest date when the tender or the names of those willing to submit tenders, may be sent in.

MARCH 2.—**Nantwich.**—SEWER.—Construction of about 60 yds. of 6-in. pipe sewer and 150 yds. of 9-in. pipe sewer for the U.D.C. Specifications of the Engineer and Surveyor, Mr. W. F. Newey, Council Offices, 26, Pepper-street, Nantwich.

MARCH 2.—**Shipston-on-Stour.**—SEWERS.—Provision, laying, and jointing of about 3,632 yds. of 9-in. and 6-in. stoneware pipe sewers, and about 300 yds. of 5-in. cast-iron rising main, etc., for the Shipston-on-Stour R.D.C. Quantities, etc., of the Engineers, Messrs. Willcox & Raikes, 63, Temple-row, Birmingham. Deposit, £3 3s.

MARCH 2.—**Stratford-on-Avon.**—WATER WORKS.—(1) laying 1,200 yds. of water main; (2) laying 3,000 yds. of main; (3) erecting mechanical filter and pumping-house; (4) constructing concrete and brick reservoir. Quantities, etc., of Mr. E. Dixon, Borough Surveyor, Stratford-on-Avon.

MARCH 2.—**Tonbridge.**—STREET WORKS.—Making-up of Hilden Park-road, Hildenborough, approximately 500 yds. in length, for the Tonbridge R.D.C. Quantities of Mr. Frank Harris, Engineer and Surveyor, Broadway, Southborough, Tunbridge Wells. Deposit, £2 2s.

MARCH 3.—**Birkenhead.**—ROADS.—For making roadways at the Birkenhead Union Workhouse and Infirmary for the Board of Guardians. Forms of tender from Messrs. E. Kirby & Sons, architects, 5, Cook-street, Liverpool.

MARCH 3.—**Wellington.**—WATER WORKS.—For providing and laying water mains, etc., for the Lawley Bank Water Supply for the R.D.C. Quantities of the engineers, Messrs. Willcox & Raikes, 63, Temple-row, Birmingham. Deposit, £3 3s.

MARCH 4.—**Chapel-en-le-Frith.**—WATER WORKS.—Providing and laying about 2,400 yds. of 3-in. and 525 yds. of 4-in. cast-iron water mains, including all valves, hydrants, etc., for the R.D.C. Quantities, etc., at the office of the engineers, Messrs. Brady & Partington, Chapel-en-le-Frith. Deposit, £2 2s.

MARCH 4.—**Ware.**—STREET WORKS.—Making-up the top portion of the streets known as Bowling-road and Jeffries-road, for the Ware U.D.C. Quantities of the Surveyor to the Council, Town Hall, Ware.

MARCH 6.—**Askwith.**—ASPHALTING.—Asphalting the playgrounds of Askwith Council School. Specifications of Mr. T. W. Padgett, Divisional Clerk, Otley.

MARCH 7.—**Hayes.**—STREET WORKS.—Making-up of Clarendon-road, Trevor-road, Silverdale-road (part of), Clayton-road (part of), and Blyth-road (part of), for the U.D.C. Quantities of Mr. D. C. Fidler, Engineer and Surveyor to the Council, Grange-road, Hayes End, Middlesex. Deposit, £2.

MARCH 10.—**Eastleigh.**—STREET WORKS.—Making-up of the following private streets, viz.:—(1) Barton-road; (2) Desborough-road; (3) High-street; (4) Weston-road; (5) Northlands-road; (6) Bellevue-road; (7) The Crescent, for the U.D.C. Quantities of Mr. W. Wallace Gandy, Engineer and Surveyor, Council Offices, Eastleigh. Deposit, £2.

MARCH 11.—**Ryton.**—STREET WORKS.—Construction of street works at (1) Elvaston; (2) Crookhill, comprising cement footways, whinstone paving, etc. Quantities, etc., of Mr. John P. Dalton, Surveyor, Council Offices, Ryton-on-Tyne. Deposit, 10s.

MARCH 14.—**Merthyr Tydfil.**—SEWER.—Laying of 30-in. main sewer, Troedyrhiw to Quaker's Yard for the Corporation. Quantities of the Borough Engineer, Town Hall, Merthyr Tydfil. Deposit, £3 3s.

APRIL 11.—**Keighley.**—WATERWORKS.—Construction of a storage reservoir, with an earthen embankment, valve tower, outlet culvert, waste weir, waste watercourse, flood watercourse, and residuum lodge and gauge basin; also of a series of four filter-beds, clear-water basin, straining well, and venturi meter and recording-house, etc., for the Keighley Corporation. Quantities, etc., of the Engineer, Mr. M. Ratcliffe Barnett, M.Inst.C.E., either at the Town Hall, Keighley, or at the Sladen Valley Waterworks, near Haworth. Deposit, £10 10s.

Public Appointments.

FEBRUARY 25.—CLERK OF WORKS.—The Coventry Corporation invite applications for the above post. Salary, £4 4s. per week.

* FEBRUARY 28.—JUNIOR ASSISTANT.—Applications are invited for the above post. Salary, £104 per annum.

Auction Sales.

* FEBRUARY 24.—**Manchester.**—Messrs. E. Rushton, Son, & Kenyon will sell by auction, at the Thatched House Hotel, Market-place, the business of a sanitary pipe manufacturer

* FEBRUARY 25.—Messrs. Churchill & Sim will sell by auction, at the Great Hall, Winchester House, Old Broad-street, E.C., an assortment of deals, battens, boards, timbers, etc.

* MARCH 12.—**Blackheath Hill.**—Messrs. Farebrother, Ellis, & Co. will sell by auction, at the Mart, freehold property.

* MARCH 19.—**Holloway.**—Messrs. Newbon & Shephards will sell by auction, at the Mart, freehold property.

[Those with an asterisk (*) are advertised in this issue.]

THE LONDON COUNTY COUNCIL.

THE usual weekly meeting of the London County Council was held on Tuesday in the County Hall, Spring-gardens, S.W., Mr. Cyril Cobb, Chairman, presiding.

Tenders.—Tenders were received for painting at various schools; for an electrical installation at the secondary school, Brockley; for the supply of oils, grease, etc., and building materials

District Surveyor Appointment.—The Building Acts Committee recommended that Mr. Arthur Crow be appointed District Surveyor of Finsbury.

Painters' Wages.—A discussion was raised over a report presented by the Education Committee in reference to certain tenders which were accepted subject to a condition that while the contract should contain the Council's rate of 9½d. an hour for painters, a variation order would be given omitting all painting work unless and until the question of the rate of wages to be paid had been definitely settled.

Sir John Benn said that they had decided that 9½d. was the proper rate, and since many of the contractors would not tender on this basis they ought to be strong enough to take the matter into their own hands. He moved as an amendment that the Committee should be instructed to bring up estimates for the painting work to be done at the six schools concerned in the question, to be done by the direct employment of labour at the rate of wage settled by the Council.

Mr. F. L. Dove said that 9d. was the standard rate throughout London, and 9½d. was a fictitious rate.

Mr. Cyril Jackson said that while he would vote for the amendment, he did not intend to throw himself into the hands of the Master Builders' Association, and it would be absurd for the Council to start a works department because of a difficulty which might settle itself within a month or two.

Mr. Dew denied that 9d. was the standard rate. The rates in the Council schedule were rates agreed upon between masters and men, and the men had never agreed to the 9d. rate.

The amendment was lost and the recommendation of the Committee agreed to.

Theatres, etc.—The Theatres and Music Halls Committee have approved of the following drawings.—Ambassadors Theatre—proposed drencher system; 75, Balham High-road—alterations to seating and reconstruction of men's conveniences; Blackheath Concert Hall—alterations to the electrical installation; 133-9, Commercial-road—heating arrangements; Globe Theatre—apron stage in connection with the production of "Kismet"; Great Western-road and Hormead-road—Deviations from the approved drawings of the proposed cinematograph hall and proposed ventilation scheme and lighting arrangements; 117 and 119, Kingsland-road—alterations to the ladies' lavatories; 538 and 540, Kingsland-road—arrangement of the manager's office: London Coliseum—proposed scene dock; Oxford-street (Electric Pavilion)—arrangement of boiler house and men's lavatory and ventilation of the operating enclosure; Park-lane Hotel, Piccadilly—extension of proposed hotel; 277-281, Queen's-road, Peckham—scheme of ventilation.

PRICES CURRENT OF MATERIALS.

*** Our aim in this list is to give, as far as possible, the *average* prices of materials, not necessarily the highest or lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information.

BRICKS, &c.

Per 1000 Alongside, in River.	£ s. d.
Best Stocks	1 16 6
Picked Stocks for Facings	2 10 0

Per 1000, Delivered at Railway Depôt.	£ s. d.		£ s. d.
Flettons	1 14 0	Best Blue Pressed Staffordshire	3 15 0
Best Fareham Red	3 12 0	Do. Bullnose	4 0 0
Best Red Pressed Ruabon Facing	5 0 0	Best Stourbridge Fire Bricks	4 0 0

GLAZED BRICKS—

Best White, Ivory, and Salt Glazed Stretchers	12 7 6	Double Headers	14 17 6
Headers	11 17 6	One Side and two Ends	18 17 6
Quoins, Bullnose and 4½ in. Flats	15 17 6	Two Sides and one End	19 17 6
D'ble Str'tch'rs	17 17 6	8plays and Squints	17 7 6

Second Quality £1 10s. per 1000 less than best.

	s. d.	
Thames and Pit Sand	7 0	per yard, delivered.
Thames Ballast	5 9	" "
Best Portland Cement	37 0	per ton, "
Best Ground Blue Lias Lime	20 0	" "

NOTE—The cement or lime is exclusive of the ordinary charge for sacks.

Grey Stone Lime ..... 14s. 0d. per yard delivered.
Stourbridge Fireclay in sacks 27s. 0d. per ton at rly. dpt.

STONE.

Per Ft. Cube.	s. d.
BATH STONE—delivered on road waggons, Paddington Depôt	1 7½
Do. do. delivered on road waggons, Nine Elms Depôt	1 9½
PORTLAND STONE (20 ft. average)—	
Brown Whitbed, delivered on road waggons, Paddington Depôt, Nine Elms Depôt, or Pimlico Wharf	2 4½
White Basebed, delivered on road waggons Paddington Depôt, Nine Elms Depôt, or Pimlico Wharf	2 6½

STONE (*Continued*).

Per Ft. Cube, delivered at Railway Depôt.	s. d.		s. d.
Ancaster in blocks	1 10	Closeburn Red Freestone	2 0
Beer in blocks	1 6	Red Mansfield Freestone	2 4
Greenshill in blocks	1 10	Talacre & Gwespyr Stone	2 4
Darley Dale in blocks	2 4		
Red Corsehill in blocks	2 3		

YORK STONE—*Robin Hood Quality.*

Per Ft. Cube, Delivered at Railway Depôt.	s. d.
Scappled random blocks	2 10
Per Ft. Super., Delivered at Railway Depôt.	
6 in. sawn two sides landings to sizes (under 40 ft. super.)	2 8
6 in. rubbed two sides ditto, ditto	2 6
3 in. sawn two sides slabs (random sizes)	0 11½
2 in. to 2½ in. sawn one side slabs (random sizes)	0 7
1½ in. to 2 in. ditto, ditto	0 6

HARD YORK—

Per Ft. Cube, Delivered at Railway Depôt.	
Scappled random blocks	3 0
Per Ft. Super., Delivered at Railway Depôt.	
6 in. sawn two sides landing to sizes (under 40 ft. super.)	2 8
6 in. rubbed two sides ditto	3 0
3 in. sawn two sides slabs (random sizes)	1 2
2 in. self-faced random flags	0 5

SLATES.

Per 1000 of 1200 at Railway Depôt.	£ s. d.		£ s. d.
In. In. 20 x 10 best blue Bangor	13 2 6	In. In. 20 x 10 best Eureka unfading green	15 17 6
20 x 12 ditto	13 17 6	20 x 12 ditto	18 7 6
20 x 10 1st q'lity ditto	13 0 0	18 x 10 ditto	13 5 0
20 x 12 ditto	13 15 0	16 x 8 ditto	10 5 0
16 x 8 ditto	7 5 0	20 x 10 permanent green	11 12 6
22 x 10 best blue Portmadoc	12 12 6	18 x 10 ditto	9 12 6
16 x 8 ditto	6 12 6	16 x 8 ditto	6 12 6

TILES.

At Railway Depôt.	s. d.		s. d.
Best plain red roofing (per 1000)	42 0	Best "Hartshill" brand, plain sand-faced (per 1000)	45 0
Hip and Valley (per doz.)	3 7	Do. pressed (per 1000)	42 6
Best Broseley (per 1000)	50 0	Do. Ornamental (per 1000)	47 6
Do. Ornamental (per 1000)	52 6	Hip (per doz.)	4 0
Hip and Valley (per doz.)	4 0	Valley (per doz)	3 6
Best Ruabon red, brown, or bridle (Edw'ds) (per 1000)	57 6	Staffords. (Hanley) Reds or Brindled (per 1000)	42 6
Do. Ornamental (per 1000)	60 0	Hand-made sand-faced (per 1000)	45 0
Hip (per doz.)	4 0	Hip (per doz.)	4 0
Valley (per doz.)	3 0	Valley (per doz)	3 6

WOOD.

BUILDING WOOD.	At per standard. £ s. d.		£ s. d.
Deals: best 3 in. by 11 in. and 4 in. by 9 in. and 11 in.	15 0 0	..	16 10 0
Deals: best 3 in. by 9 in.	15 0 0	..	16 0 0
Battens: best 2½ in. by 7 in. and 3 in., and 3 in. by 7 in. and 8 in.	12 10 0	..	13 10 0
Battens: best 2½ in. by 6 and 3 by 6	0 10 0		less than 7 in. and 8 in. less than best
Deals: seconds	1 0 0		
Battens: seconds	0 10 0		"
2 in. by 4 in. and 2 in. by 6 in.	11 10 0	..	12 10 0
2 in. by 4½ in. and 2 in. by 5 in.	10 10 0	..	11 10 0

WOOD (*Continued*).

BUILDING WOOD (*Continued*)—	At per standard. £ s. d.
Foreign Sawn Boards—1 in. and 1¼ in. by 7 in.	0 10 0 more than battens.
¾ in.	1 0 0 „
	At per load of 50 ft.
Fir timber: best middling Danzig or Memel (average specification)	5 0 0 .. 6 5 0
	4 10 0 .. 5 0 0
Seconds	3 17 6 .. 4 0 0
Small timber (8 in. to 10 in.)	3 5 0 .. 3 10 0
Small timber (6 in. to 8 in.)	2 12 6 .. 3 0 0
Swedish balks	
Pitch-pine timber (30 ft. average)	6 0 0 .. 7 0 0
JOINERS' WOOD.	At per standard.
White Sea: first yellow deals, 3 in. by 11 in.	26 0 0 .. 27 0 0
3 in. by 9 in.	24 0 0 .. 25 0 0
Battens, 2½ in. and 3 in. by 7 in.	18 10 0 .. 19 10 0
Second yellow deals, 3 in. by 11 in.	21 10 0 .. 22 10 0
Do. 3 in. by 9 in.	20 0 0 .. 21 0 0
Battens, 2½ in. and 3 in. by 7 in.	15 0 0 .. 16 0 0
Third yellow deals, 3 in. by 11 in. and 9 in.	16 0 0 .. 17 0 0
Battens, 2½ in. and 3 in. by 7 in.	14 0 0 .. 15 0 0
Petersburg: first yellow deals, 3 in. by 11 in.	23 0 0 .. 24 0 0
Do. 3 in. by 9 in.	20 0 0 .. 21 0 0
Battens	15 0 0 .. 16 0 0
Second yellow deals, 3 in. by 11 in.	17 10 0 .. 18 10 0
Do. 3 in. by 9 in.	16 0 0 .. 17 0 0
Battens	12 10 0 .. 13 10 0
Third yellow deals, 3 in. by 11 in.	14 0 0 .. 15 0 0
Do. 3 in. by 9 in.	13 10 0 .. 14 10 0
Battens	11 10 0 .. 12 10 0
White Sea and Petersburg—First white deals, 3 in. by 11 in.	16 10 0 .. 17 10 0
First white deals, 3 in. by 9 in.	14 10 0 .. 15 10 0
Battens	13 0 0 .. 13 10 0
Second white deals, 3 in. by 11 in.	14 10 0 .. 15 10 0
Second white deals, 3 in. by 9 in.	13 0 0 .. 14 0 0
Battens	12 0 0 .. 12 10 0
Pitch-pine deals	25 0 0 .. 26 10 0
Under 2 in. thick extra	0 10 0 .. 1 0 0
Columbian or Oregon Pine, best quality	23 10 0 .. 26 0 0
Yellow Pine—First, regular sizes	50 0 0 upwards.
Oddments	35 0 0 „
Seconds, regular sizes	36 0 0 „
Oddments	31 0 0 „
Kauri Pine—Planks per ft. cube	0 5 6 .. 0 6 6
Danzig and Stettin Oak Logs—Large, per ft. cube	0 3 0 .. 0 3 9
Small „ „	0 2 6 .. 0 3 0
Wainscot Oak Logs, per ft. cube	0 7 6 .. 0 9 0
Dry Wainscot Oak, per ft. super, as inch	0 0 10 .. 0 1 2
¾ in. do. do.	0 0 9 .. 0 1 0
Dry Mahogany—Honduras, Tabasco, per ft. super, as inch	0 0 10 .. 0 1 3
Selected, Figury, per ft. super, as inch	0 1 6 .. 0 2 6
Cuba Mahogany	0 1 4 .. 0 2 6
	upwards.
Dry Walnut, American, per ft. super, as inch	0 0 10 .. 0 1 2
French "Italian" Walnut	0 0 10 .. 0 1 4
Teak, per load (Rangoon or Moulmein)	20 10 0 .. 26 0 0
Do., do. (Java)	19 0 0 .. 22 10 0
American Whitewood planks, per ft. cube	0 5 6 .. 0 6 6
Prepared Flooring, etc.—	Per square.
1 in. by 7 in. yellow, planed and shot	0 14 6 .. 0 18 0
1 in. by 7 in. yellow, planed and matched	0 14 9 .. 0 18 0
1¼ in. by 7 in. yellow, planed and matched	0 17 6 .. 1 3 0
1 in. by 7 in. white, planed and shot	0 14 0 .. 0 16 0
1 in. by 7 in. white, planed and matched	0 14 3 .. 0 16 6
1¼ in. by 7 in. white, planed and matched	0 16 6 .. 0 8 6
¾ in. by 7 in. yellow, matched and beaded or V-jointed boards	0 12 6 .. 0 15 0
1 in. by 7 in. „ „	0 15 0 .. 0 18 6
¾ in. by 7 in. white „ „	0 12 0 .. 0 14 0
1 in. by 7 in. „ „	0 14 6 .. 0 16 6
6 in. at 6d. to 9d. per square less than 7 in.	

JOISTS, GIRDERS, &c.

	In London or delivered Railway Vans, per ton. £ s. d.
Rolled Steel Joists, ordinary sections	9 0 0 .. 10 0 0
Compound Girders, ordinary sections	11 0 0 .. 12 0 0
Steel Compound Stanchions	12 0 0 .. 13 0 0
Angles, Tees, and Channels, ordinary sections	11 0 0 .. 12 0 0
Flitch Plates	11 0 0 .. 12 0 0
Cast Iron Columns & Stanchions, including ordinary patterns	8 10 0 .. 9 0 0

METALS.

IRON—	Per ton, in London. £ s. d.	£ s. d.
Common Bars	9 0 0 ..	9 10 0
Staffordshire Crown Bars, good merchant quality	9 5 0 ..	9 15 0
Staffordshire "Marked Bars"	11 0 0 ..	—
Mild Steel Bars	9 5 0 ..	9 15 0
Hoop Iron, basis price	10 0 0 ..	—
„ „ Galvanised	17 10 0 ..	—

* And upwards, according to size and gauge.

METALS (*Continued*).

IRON (*Continued*)—	Per ton, in London. £ s. d.	£ s. d.
Sheet Iron Black—Ordinary sizes to 20 g.	10 5 0 ..	—
„ „ 24 g.	11 5 0 ..	—
„ „ 26 g.	12 15 0 ..	—
Sheet Iron, Galvanised, flat, ordinary quality—Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	15 10 0 ..	—
Ordinary sizes to 22 g. and 24 g.	16 0 0 ..	—
Ordinary sizes to 26 g.	17 0 0 ..	—
Sheet Iron, Galvanised, flat, best quality—Ordinary sizes to 20 g.	18 10 0 ..	—
„ „ 22 g. and 24 g.	19 0 0 ..	—
Ordinary sizes to 26 g.	20 10 0 ..	—
Galvanised Corrugated Sheets—Ordinary sizes, 6 ft. to 8 ft. 20 g.	15 0 0 ..	—
Ordinary sizes, 22 g. and 24 g.	15 5 0 ..	—
Ordinary sizes, 26 g.	16 15 0 ..	—
Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker	12 10 0 ..	—
Best Soft Steel Sheets, 22 g. & 24 g.	13 10 0 ..	—
Best Soft Steel Sheets, 26 g.	15 10 0 ..	—
Cut Nails, 3 in. to 6 in.	11 0 0 ..	11 10 0
(Under 3 in., usual trade extras.)		

LEAD, &c.

	Delivered in London. £ s. d.	£ s. d.
LEAD—Sheet, English, 4 lb. and up	22 15 0 ..	—
Pipe in coils	22 10 0 ..	—
Soil pipe	25 10 0 ..	—
Compo pipe	25 10 0 ..	—
ZINC—Sheet—	In casks of 10 cwt.	
Vielle Montagne	28 5 0 ..	—
Silesian	28 10 0 ..	—
Zinc, in bundles, 1s. per cwt. extra.		
COPPER—Strong Sheet per lb.	0 1 1 ..	—
Thin „ „	0 1 2 ..	—
Copper nails „	0 1 0 ..	—
Copper wire „	0 1 0 ..	—
BRASS—Strong Sheet „	0 1 0 ..	—
Thin „	0 1 1 ..	—
TIN—English Ingots .. „	0 1 10 ..	—
SOLDER—Plumbers' „	0 0 10 ..	—
Tinmen's „	0 1 1 ..	—
Blowpipe „	0 1 3 ..	—

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES.*

Per Ft. Delivered.

15 oz. thirds	2½d.	26 oz. fourths	3¾d.
„ fourths	2d.	32 oz. thirds	5½d.
21 oz. thirds	3½d.	„ fourths	4½d.
„ fourths	3d.	Fluted Sheet, 15 oz.	3d.
26 oz. thirds	4½d.	„ 21 oz.	4d.

ENGLISH ROLLED PLATE IN CRATES OF STOCK SIZES.*

Per Ft. Delivered.

¼ Rolled plate	2½d.
⅜ Rough rolled and rough cast plate	2½d.
½ Rough rolled and rough cast plate	3d.
Figured Rolled, Oxford Rolled, Oceanic, Arctic, Muffled, and Rolled Cathedral, white	3½d.
Ditto, tinted	5d.

* Not less than two crates.

OILS, &c.

		£ s. d.
Raw Linseed Oil in pipes	per gallon	0 2 2
„ „ „ in barrels	„	0 2 3
„ „ „ in drums	„	0 2 5
Boiled „ „ in barrels	„	0 2 5
„ „ „ in drums	„	0 2 8
Turpentine in barrels	„	0 2 9
„ in drums	„	0 2 11
Genuine Ground English White Lead, (In not less than 5 cwt. casks.)	per ton	29 15 0
Red Lead, Dry	per ton	28 0 0
Best Linseed Oil Putty	per cwt.	0 9 0
Stockholm Tar	per barrel	1 12 0

VARNISHES, &c.

	Per gallon. £ s. d.
Fine Pale Oak Varnish	0 8 0
Pale Copal Oak	0 10 6
Superfine Pale Elastic Oak	0 12 6
Fine Extra Hard Church Oak	0 10 0
Superfine Hard-drying Oak, for seats of Churches	0 14 6
Fine Elastic Carriage	0 12 9
Superfine Pale Elastic Carriage	0 16 0
Fine Pale Maple	0 10 0
Finest Pale Durable Copal	0 18 6
Extra Pale French Oil	1 1 0
Eggshell Flating Varnish	0 18 0
White Pale Enamel	1 4 0
Extra Pale Paper	0 12 0
Best Japan Gold Size	0 10 0
Best Black Japan	0 16 0
Oak and Mahogany Stain	0 9 0
Brunswick Black	0 8 0
Berlin Black	0 16 0
Knotting	0 10 6
French and Brush Polish	0 10 0

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We cannot undertake to return rejected communications; and the Editor cannot be responsible for drawings, photographs, manuscripts, or other documents, or for models or samples sent to or left at this office, unless he has specially asked for them.

All drawings sent to or left at this office for consideration should bear the owner's name and address on either the face or back of the drawing. Delay and inconvenience may result from inattention to this.

Any commission to a contributor to write an article, or to execute or lend a drawing for publication, is given subject to the approval of the article or drawing, when received, by the Editor, who retains the right to reject it if unsatisfactory. The receipt by the author of a proof of an article in type does not necessarily imply its acceptance.

N.B.—Illustrations of the First Premiated Design in any important architectural competition will always be accepted for publication by the Editor, whether they have been formally asked for or not.

TENDERS.

Communications for insertion under this heading should be addressed to "The Editor," and must reach us *not later than* 6 *p.m. on Wednesday.* [N.B.—We cannot publish Tenders unless authenticated either by the architect or the building owner; and we cannot publish announcements of Tenders accepted unless the amount of the Tender is stated, nor any list in which the lowest Tender is under 100*l.* unless in some exceptional cases and for special reasons.]

* Denotes *accepted.* † Denotes *provisionally accepted.*

BURFORD.—Conversion of boys' school into mixed school, for the Oxfordshire County Council:—
Woolridge & Simpson, Oxford* £1,998 14 3

CANTON (Cardiff). — For the completion of St. Luke's Church, Canton, Cardiff, for the Rev. T. J. Richards, Vicar, and Committee. Mr. Geo. E. Halliday, F.S.A., architect, 9, Quay-street, Cardiff:—

H. Pittard & Son	£1,495 0 0	G. Cousens & Sons, Ltd.	£1,400 0 0
J. Gibson	1,494 0 0	R. E. J. Haines	1,395 0 0
W. Dunn	1,490 0 0	Bardo	1,384 7 2
D. Davies & Sons	1,490 0 0	Knox & Wells, Bangor-street, Roath, Cardiff*	1,367 0 0
W. H. Evans	1,466 0 0	E. A. Bond & Co.	1,300 0 0
Symonds & Sons	1,424 0 0		
E. L. Price	1,420 0 0		
E. Turner & Sons	1,408 14 4		

CROWLAND.—For erection of new Wesleyan church. Mr. A. Brocklehurst, architect, Manchester:—
Cracknell, Peterborough* £3,067

DORCHESTER.—For erection of semi-detached houses, Victoria Park Estate. Messrs. Jackson, Son, & Feacey, architects, Dorchester:—

Jesty & Baker	£1,175	T. Conway, Ltd.	£1,085
A. E. Pickett	1,175	C. E. Slade, Dorchester‡	1,075
Watts Bros.	1,149		

[‡ Accepted subject to amendment.]

EASTBURY.—For rebuilding of Eastbury Bridge, for the Berkshire County Council:—
Steelwork: Horsehay Co.* £234 0 0
Brickwork: Langley & Johnson* 306 4 3

HONILEY (Warwickshire).—For the erection of buildings, for Mr. Herbert L. Wade. Mr. Chas. E. Bateman, F.R.I.B.A., architect, 18, Bennetts-hill, Birmingham:—

Rothouse	£16,034	G. F. Smith	£14,719
Benfield & Loxley	15,782	Grove	14,675
Foslin & Dickson	15,727	Bishop	14,577
J. Smith	15,600	Elvins	14,570
Kingerlee	15,574	Cleaver	14,557
Franklin	15,500	Crowder	14,429
T. W. Bowen	15,462	F. H. Smith	14,395
Wilcock	15,400	Bowens	14,266
Briley	15,300	Espley	14,000
Lowe	15,200	Moss	13,940
East Court	15,094	Barnsley	13,760
Parnell	15,078	Lord	13,744
Dallow	15,071	Gibbs	13,617
Whitehouse	15,060	Langley	13,440
Bell	14,880	Henson	13,4[illegible]3
Collins & Godfrey	14,812	Bragg	13,196
Sapcote	14,800		

REVISED ESTIMATES.

—	House and Outbuildings, etc. £ s. d.	Drainage. £ s. d.	Cottages and Stables. £ s. d.
Collins & Godfrey	10,949 0 0	635 0 0	3,178 0 0
Barnsley	10,266 0 0	563 0 0	2,934 0 0
Espley	10,246 0 0	580 0 0	2,876 0 0
Langley	9,860 0 0	597 0 0	2,909 0 0
Bragg, Solihull, Warwickshire	9,805 0 0‡	566 0 0‡	2,912 0 0‡

[‡ Accepted subject to 1½ per cent. discount.]

HOVE.—For enlarging the steam-roller sheds at Sackville-road Depôt, for the Corporation. Mr. H. Hamilton Scott, Borough Surveyor:—
A. Chadwell, 97, Blatchington-road, Hove* £215

ROADS, etc.—*continued*

The date given at the commencement of each paragraph is the latest date when the tender or the names of those willing to submit tenders, may be sent in.

MARCH 2.—**Nantwich.**—SEWER.—Construction of about 60 yds. of 6-in. pipe sewer and 150 yds. of 9-in. pipe sewer for the U.D.C. Specifications of the Engineer and Surveyor, Mr. W. F. Newey, Council Offices, 26, Pepper-street, Nantwich.

MARCH 2.—**Shipston-on-Stour.**—SEWERS.—Provision, laying, and jointing of about 3,632 yds. of 9-in. and 6-in. stoneware pipe sewers, and about 300 yds. of 5-in. cast-iron rising main, etc., for the Shipston-on-Stour R.D.C. Quantities, etc., of the Engineers, Messrs. Willcox & Raikes, 63, Temple-row, Birmingham. Deposit, £3 3s.

MARCH 2.—**Stratford-on-Avon.**—WATER WORKS.—(1) laying 1,200 yds. of water main; (2) laying 3,000 yds. of main; (3) erecting mechanical filter and pumping-house; (4) constructing concrete and brick reservoir. Quantities, etc., of Mr. E. Dixon, Borough Surveyor, Stratford-on-Avon.

MARCH 2.—**Tonbridge.**—STREET WORKS.—Making-up of Hilden Park-road, Hildenborough, approximately 500 yds. in length, for the Tonbridge R.D.C. Quantities of Mr. Frank Harris, Engineer and Surveyor, Broadway, Southborough, Tunbridge Wells. Deposit, £2 2s.

MARCH 3.—**Birkenhead.**—ROADS.—For making roadways at the Birkenhead Union Workhouse and Infirmary for the Board of Guardians. Forms of tender from Messrs. E. Kirby & Sons, architects, 5, Cook-street, Liverpool.

MARCH 3.—**Wellington.**—WATERWORKS.—For providing and laying water mains, etc., for the Lawley Bank Water Supply for the R.D.C. Quantities of the engineers, Messrs. Willcox & Raikes, 63, Temple-row, Birmingham. Deposit, £3 3s.

MARCH 4.—**Chapel-en-le-Frith.**—WATER WORKS.—Providing and laying about 2,400 yds. of 3-in. and 525 yds. of 4-in. cast-iron water mains, including all valves, hydrants, etc., for the R.D.C. Quantities, etc., at the office of the engineers, Messrs. Brady & Partington, Chapel-en-le-Frith. Deposit, £2 2s.

MARCH 4.—**Ware.**—STREET WORKS.—Making-up the top portion of the streets known as Bowling-road and Jeffries-road, for the Ware U.D.C. Quantities of the Surveyor to the Council, Town Hall, Ware.

MARCH 6.—**Askwith.**—ASPHALTING.—Asphalting the playgrounds of Askwith Council School. Specifications of Mr. T. W. Padgett, Divisional Clerk, Otley.

MARCH 7.—**Hayes.**—STREET WORKS.—Making-up of Clarendon-road, Trevor-road, Silverdale-road (part of), Clayton-road (part of), and Blyth-road (part of), for the U.D.C. Quantities of Mr. D. C. Fidler, Engineer and Surveyor to the Council, Grange-road, Hayes End, Middlesex. Deposit, £2.

MARCH 10.—**Eastleigh.**—STREET WORKS.—Making-up of the following private streets, viz.:—(1) Barton-road; (2) Desborough-road; (3) High-street; (4) Weston-road; (5) Northlands-road; (6) Bellevue-road; (7) The Crescent, for the U.D.C. Quantities of Mr. W. Wallace Gandy, Engineer and Surveyor, Council Offices, Eastleigh. Deposit, £2.

MARCH 11.—**Ryton.**—STREET WORKS.—Construction of street works at (1) Elvaston; (2) Crookhill, comprising cement footways, whinstone paving, etc. Quantities, etc., of Mr. John P. Dalton, Surveyor, Council Offices, Ryton-on-Tyne. Deposit, 10s.

MARCH 14.—**Merthyr Tydfil.**—SEWER.—Laying of 30-in. main sewer, Troedyrhiw to Quaker's Yard for the Corporation. Quantities of the Borough Engineer, Town Hall, Merthyr Tydfil. Deposit, £3 3s.

APRIL 11.—**Keighley.**—WATERWORKS.—Construction of a storage reservoir, with an earthen embankment, valve tower, outlet culvert, waste weir, waste watercourse, flood watercourse, and residuum lodge and gauge basin; also of a series of four filter-beds, clear-water basin, straining well, and venturi meter and recording-house, etc., for the Keighley Corporation. Quantities, etc., of the Engineer, Mr. M. Ratcliffe Barnett, M.Inst.C.E., either at the Town Hall, Keighley, or at the Sladen Valley Waterworks, near Haworth. Deposit, £10 10s.

Public Appointments.

FEBRUARY 25.—CLERK OF WORKS.—The Coventry Corporation invite applications for the above post. Salary, £4 4s. per week.

* FEBRUARY 28.—JUNIOR ASSISTANT.—Applications are invited for the above post. Salary, £104 per annum.

Auction Sales.

* FEBRUARY 24.—**Manchester.**—Messrs. E. Rushton, Son, & Kenyon will sell by auction, at the Thatched House Hotel, Market-place, the business of a sanitary pipe manufacturer

* FEBRUARY 25.—Messrs. Churchill & Sim will sell by auction, at the Great Hall, Winchester House, Old Broad-street, E.C., an assortment of deals, battens, boards, timbers, etc.

* MARCH 12.—**Blackheath Hill.**—Messrs. Farebrother, Ellis, & Co. will sell by auction, at the Mart, freehold property.

* MARCH 19.—**Holloway.**—Messrs. Newbon & Shephards will sell by auction, at the Mart, freehold property.

[Those with an asterisk (*) are advertised in this issue.]

THE LONDON COUNTY COUNCIL.

THE usual weekly meeting of the London County Council was held on Tuesday in the County Hall, Spring-gardens, S.W., Mr. Cyril Cobb, Chairman, presiding.

Tenders.—Tenders were received for painting at various schools; for an electrical installation at the secondary school, Brockley; for the supply of oils, grease, etc., and building materials

District Surveyor Appointment.—The Building Acts Committee recommended that Mr. Arthur Crow be appointed District Surveyor of Finsbury.

Painters' Wages.—A discussion was raised over a report presented by the Education Committee in reference to certain tenders which were accepted subject to a condition that while the contract should contain the Council's rate of 9½d. an hour for painters, a variation order would be given omitting all painting work unless and until the question of the rate of wages to be paid had been definitely settled.

Sir John Benn said that they had decided that 9½d. was the proper rate, and since many of the contractors would not tender on this basis they ought to be strong enough to take the matter into their own hands. He moved as an amendment that the Committee should be instructed to bring up estimates for the painting work to be done at the six schools concerned in the question, to be done by the direct employment of labour at the rate of wage settled by the Council.

Mr. F. L. Dove said that 9d. was the standard rate throughout London, and 9½d. was a fictitious rate.

Mr. Cyril Jackson said that while he would vote for the amendment, he did not intend to throw himself into the hands of the Master Builders' Association, and it would be absurd for the Council to start a works department because of a difficulty which might settle itself within a month or two.

Mr. Dew denied that 9d. was the standard rate. The rates in the Council schedule were rates agreed upon between masters and men, and the men had never agreed to the 9d. rate.

The amendment was lost and the recommendation of the Committee agreed to.

Theatres, etc.—The Theatres and Music Halls Committee have approved of the following drawings:—Ambassadors Theatre—proposed drencher system; 75, Balham High-road—alterations to seating and reconstruction of men's conveniences; Blackheath Concert Hall—alterations to the electrical installation; 133-9, Commercial-road—heating arrangements; Globe Theatre—apron stage in connection with the production of "Kismet"; Great Western-road and Hormead-road—Deviations from the approved drawings of the proposed cinematograph hall and proposed ventilation scheme and lighting arrangements; 117 and 119, Kingsland-road—alterations to the ladies' lavatories; 538 and 540, Kingsland-road—arrangement of the manager's office: London Coliseum—proposed scene dock; Oxford-street (Electric Pavilion)—arrangement of boiler house and men's lavatory and ventilation of the operating enclosure; Park-lane Hotel, Piccadilly—extension of proposed hotel; 277-281, Queen's-road, Peckham—scheme of ventilation.

PRICES CURRENT OF MATERIALS.

*** Our aim in this list is to give, as far as possible, the *average* prices of materials, not necessarily the highest or lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information.

BRICKS, &c.

	Per 1000 Alongside, in River. £ s. d.
Best Stocks	1 16 6
Picked Stocks for Facings	2 10 0

Per 1000, Delivered at Railway Depôt.	£ s. d.		£ s. d.
Flettons	1 14 0	Best Blue Pressed Staffordshire	3 15 0
Best Fareham Red	3 12 0	Do. Bullnose	4 0 0
Best Red Pressed Ruabon Facing	5 0 0	Best Stourbridge Fire Bricks	4 0 0

GLAZED BRICKS—			
Best White, Ivory, and Salt Glazed Stretchers	12 7 6	Double Headers	14 17 6
Headers	11 17 6	One Side and two Ends	18 17 6
Quoins, Bullnose and 4½ in. Flats	15 17 6	Two Sides and one End	19 17 6
D'ble Str'tch'rs	17 17 6	Splays and Squints	17 7 6

Second Quality £1 10s. per 1000 less than best.

	s. d.	
Thames and Pit Sand	7 0	per yard, delivered.
Thames Ballast	5 9	" "
Best Portland Cement	37 0	per ton, "
Best Ground Blue Lias Lime	20 0	" "

NOTE—The cement or lime is exclusive of the ordinary charge for sacks.

Grey Stone Lime ..... 14s. 0d. per yard delivered.
Stourbridge Fireclay in sacks 27s. 0d. per ton at rly. dpt.

STONE.

Per Ft. Cube.	s. d.
BATH STONE—delivered on road waggons, Paddington Depôt	1 7½
Do. do. delivered on road waggons, Nine Elms Depôt	1 9½
PORTLAND STONE (20 ft. average)—	
Brown Whitbed, delivered on road waggons, Paddington Depôt, Nine Elms Depôt, or Pimlico Wharf	2 4½
White Basebed, delivered on road waggons Paddington Depôt, Nine Elms Depôt, or Pimlico Wharf	2 6½

STONE (*Continued*).

Per Ft. Cube, delivered at Railway Depôt.	s. d.		s. d.
Ancaster in blocks	1 10	Closeburn Red Freestone	2 0
Beer in blocks	1 6	Red Mansfield Freestone	2 4
Greenshill in blocks	1 10	Talacre & Gwespyr Stone	2 4
Darley Dale in blocks	2 4		
Red Corsehill in blocks	2 3		

YORK STONE—*Robin Hood Quality.*

Per Ft. Cube, Delivered at Railway Depôt.	s. d.
Scappled random blocks	2 10
Per Ft. Super., Delivered at Railway Depôt.	
6 in. sawn two sides landings to sizes (under 40 ft. super.)	2 8
6 in. rubbed two sides ditto, ditto	2 6
3 in. sawn two sides slabs (random sizes)	0 11½
2 in. to 2½ in. sawn one side slabs (random sizes)	0 7
1½ in. to 2 in. ditto, ditto	0 6

HARD YORK—

Per Ft. Cube, Delivered at Railway Depôt.	s. d.
Scappled random blocks	3 0
Per Ft. Super., Delivered at Railway Depôt.	
6 in. sawn two sides landing to sizes (under 40 ft. super.)	2 8
6 in. rubbed two sides ditto	3 0
3 in. sawn two sides slabs (random sizes)	1 2
2 in. self-faced random flags	0 5

SLATES.

Per 1000 of 1200 at Railway Depôt. In. In.	£ s. d.	In. In.	£ s. d.
20 x 10 best blue Bangor	13 2 6	20 x 10 best Eureka unfading green	15 17 6
20 x 12 ditto	13 17 6	20 x 12 ditto	18 7 6
20 x 10 1st q'lity ditto	13 0 0	18 x 10 ditto	13 5 0
20 x 12 ditto	13 15 0	16 x 8 ditto	10 5 0
16 x 8 ditto	7 5 0	20 x 10 permanent green	11 12 6
22 x 10 best blue Portmadoc	12 12 6	18 x 10 ditto	9 12 6
16 x 8 ditto	6 12 6	16 x 8 ditto	6 12 6

TILES.

At Railway Depôt.	s. d.		s. d.
Best plain red roofing (per 1000)	42 0	Best "Hartshill" brand, plain sand-faced (per 1000)	45 0
Hip and Valley (per doz.)	3 7	Do. pressed (per 1000)	42 6
Best Broseley (per 1000)	50 0	Do. Ornamental (per 1000)	47 6
Do. Ornamental (per 1000)	52 6	Hip (per doz.)	4 0
Hip and Valley (per doz.)	4 0	Valley (per doz)	3 6
Best Ruabon red, brown, or brindle (Edw'ds) (pr 1000)	57 6	Staffords. (Hanley) Reds or Brindled (per 1000)	42 6
Do. Ornamental (per 1000)	60 0	Hand-made sand-faced (per 1000)	45 0
Hip (per doz.)	4 0	Hip (per doz.)	4 0
Valley (per doz.)	3 0	Valley (per doz)	3 6

WOOD.

BUILDING WOOD.	At per standard. £ s. d.	£ s. d.
Deals: best 3 in. by 11 in. and 4 in. by 9 in. and 11 in.	15 0 0 ..	16 10 0
Deals: best 3 in. by 9 in.	15 0 0 ..	16 0 0
Battens: best 2½ in. by 7 in. and 8 in., and 3 in. by 7 in. and 8 in.	12 10 0 ..	13 10 0
Battens: best 2½ by 6 and 3 by 6	0 10 0	less than 7 in. and 8 in. less than best
Deals: seconds	1 0 0	
Battens: seconds	0 10 0 "	
2 in. by 4 in. and 2 in. by 6 in.	11 10 0 ..	12 10 0
2 in. by 4½ in. and 2 in. by 5 in.	10 10 0 ..	11 10 0

WOOD (*Continued*).

BUILDING WOOD (*Continued*)—	At per standard. £ s. d.
Foreign Sawn Boards— 1 in. and 1¼ in. by 7 in.	0 10 0 more than battens.
¾ in.	1 0 0 „
Fir timber: best middling Danzig or Memel (average specification)	At per load of 50 ft. 5 0 0 .. 6 5 0
Seconds	4 10 0 .. 5 0 0
Small timber (8 in. to 10 in.)	3 17 6 .. 4 0 0
Small timber (6 in. to 8 in.)	3 5 0 .. 3 10 0
Swedish balks	2 12 6 .. 3 0 0
Pitch-pine timber (30 ft. average)	6 0 0 .. 7 0 0
JOINERS' WOOD.	At per standard.
White Sea: first yellow deals, 3 in. by 11 in.	26 0 0 .. 27 0 0
3 in. by 9 in.	24 0 0 .. 25 0 0
Battens, 2½ in. and 3 in. by 7 in.	18 10 0 .. 19 10 0
Second yellow deals, 3 in. by 11 in.	21 10 0 .. 22 10 0
Do. 3 in. by 9 in.	20 0 0 .. 21 0 0
Battens, 2½ in. and 3 in. by 7 in.	15 0 0 .. 16 0 0
Third yellow deals, 3 in. by 11 in. and 9 in.	16 0 0 .. 17 0 0
Battens, 2½ in. and 3 in. by 7 in.	14 0 0 .. 15 0 0
Petersburg: first yellow deals, 3 in. by 11 in.	23 0 0 .. 24 0 0
Do. 3 in. by 9 in.	20 0 0 .. 21 0 0
Battens	15 0 0 .. 16 0 0
Second yellow deals, 3 in. by 11 in.	17 10 0 .. 18 10 0
Do. 3 in. by 9 in.	16 0 0 .. 17 0 0
Battens	12 10 0 .. 13 10 0
Third yellow deals, 3 in. by 11 in.	14 0 0 .. 15 0 0
Do. 3 in. by 9 in.	13 10 0 .. 14 10 0
Battens	11 10 0 .. 12 10 0
White Sea and Petersburg— First white deals, 3 in. by 11 in.	16 10 0 .. 17 10 0
First white deals, 3 in. by 9 in.	14 10 0 .. 15 10 0
Battens	13 0 0 .. 13 10 0
Second white deals, 3 in. by 11 in.	14 10 0 .. 15 10 0
Second white deals, 3 in. by 9 in.	13 0 0 .. 14 0 0
Battens	12 0 0 .. 12 10 0
Pitch-pine: deals	25 0 0 .. 26 10 0
Under 2 in. thick extra	0 10 0 .. 1 0 0
Columbian or Oregon Pine, best quality	23 10 0 .. 26 0 0
Yellow Pine — First, regular sizes	50 0 0 upwards.
Oddments	35 0 0 „
Seconds, regular sizes	36 0 0 „
Oddments	31 0 0 „
Kauri Pine—Planks per ft. cube	0 5 6 .. 0 6 6
Dantzig and Stettin Oak Logs— Large, per ft. cube	0 3 0 .. 0 3 9
Small „ „	0 2 6 .. 0 3 0
WainscotOak Logs, per ft. cube	0 7 6 .. 0 9 0
Dry Wainscot Oak, per ft. super, as inch	0 0 10 .. 0 1 2
¾ in. do. do.	0 0 9 .. 0 1 0
Dry Mahogany — Honduras, Tabasco, per ft. super, as inch	0 0 10 .. 0 1 3
Selected, Figury, per ft. super, as inch	0 1 6 .. 0 2 6
Cuba Mahogany	0 1 4 .. 0 2 6 upwards.
Dry Walnut, American, per ft. super, as inch	0 0 10 .. 0 1 2
French "Italian" Walnut	0 0 10 .. 0 1 4
Teak, per load (Rangoon or Moulmein)	20 10 0 .. 26 0 0
Do., do. (Java)	19 0 0 .. 22 10 0
American Whitewood planks, per ft. cube	0 5 6 .. 0 6 6
Prepared Flooring, etc.—	Per square.
1 in. by 7 in. yellow, planed and shot	0 14 6 .. 0 18 0
1 in. by 7 in. yellow, planed and matched	0 14 9 .. 0 18 0
1¼ in. by 7 in. yellow, planed and matched	0 17 6 .. 1 3 0
1 in. by 7 in. white, planed and shot	0 14 0 .. 0 16 0
1 in. by 7 in. white, planed and matched	0 14 3 .. 0 16 6
1¼ in. by 7 in. white, planed and matched	0 16 6 .. 0 8 6
¾ in. by 7 in. yellow, matched and beaded or V-jointed boards	0 12 6 .. 0 15 0
1 in. by 7 in. „ „	0 15 0 .. 0 18 6
¾ in. by 7 in. white „ „	0 12 0 .. 0 14 0
1 in. by 7 in. „ „	0 14 6 .. 0 16 6
6 in. at 6d. to 9d. per square less than 7 in.	

JOISTS, GIRDERS, &c.

	In London or delivered Railway Vans, per ton. £ s. d.	£ s. d.
Rolled Steel Joists, ordinary sections	9 0 0 ..	10 0 0
Compound Girders, ordinary sections	11 0 0 ..	12 0 0
Steel Compound Stanchions	12 0 0 ..	13 0 0
Angles, Tees, and Channels, ordinary sections	11 0 0 ..	12 0 0
Flitch Plates	11 0 0 ..	12 0 0
Cast Iron Columns & Stanchions, including ordinary patterns	8 10 0 ..	9 0 0

METALS.

IRON—	Per ton, in London. £ s. d.	£ s. d.
Common Bars	9 0 0 ..	9 10 0
Staffordshire Crown Bars, good merchant quality	9 5 0 ..	9 15 0
Staffordshire "Marked Bars"	11 0 0 ..	—
Mild Steel Bars	9 5 0 ..	9 15 0
Hoop Iron, basis price	10 0 0 ..	—
„ „ Galvanised	17 10 0 ..	—

* And upwards, according to size and gauge.)

METALS (*Continued*).

IRON (*Continued*)—	Per ton, in London. £ s. d.	£ s. d.
Sheet Iron Black— Ordinary sizes to 20 g.	10 5 0 ..	—
„ „ 24 g.	11 5 0 ..	—
„ „ 26 g.	12 15 0 ..	—
Sheet Iron, Galvanised, flat, ordinary quality— Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	15 10 0 ..	—
Ordinary sizes to 22 g. and 24 g.	16 0 0 ..	—
Ordinary sizes to 26 g.	17 0 0 ..	—
Sheet Iron, Galvanised, flat, best quality— Ordinary sizes to 20 g.	18 10 0 ..	—
„ „ 22 g. and 24 g.	19 0 0 ..	—
Ordinary sizes to 26 g.	20 10 0 ..	—
Galvanised Corrugated Sheets— Ordinary sizes, 6 ft. to 8 ft. 20 g.	15 0 0 ..	—
Ordinary sizes, 22 g. and 24 g.	15 5 0 ..	—
Ordinary sizes, 26 g.	16 15 0 ..	—
Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. to 20 g. and thicker	12 10 0 ..	—
Best Soft Steel Sheets, 22 g. & 24 g.	13 10 0 ..	—
Best Soft Steel Sheets, 26 g.	15 10 0 ..	—
Cut Nails, 3 in. to 6 in.	11 0 0 ..	11 10 0
(Under 3 in., usual trade extras.)		

LEAD, &c.

	Delivered in London. £ s. d.	£ s. d.
LEAD—Sheet, English, 4 lb. and up	22 15 0 ..	—
Pipe in coils	22 10 0 ..	—
Soil pipe	25 10 0 ..	—
Compo pipe	25 10 0 ..	—
ZINC—Sheet—	In casks of 10 cwt.	
Vielle Montagne	28 5 0 ..	—
Silesian	28 10 0 ..	—
Zinc, in bundles, 1s. per cwt. extra.		
COPPER— Strong Sheet per lb.	0 1 1 ..	—
Thin „ „	0 1 2 ..	—
Copper nails „	0 1 0 ..	—
Copper wire „	0 1 0 ..	—
BRASS— Strong Sheet „	0 1 0 ..	—
Thin „	0 1 1 ..	—
TIN—English Ingots „	0 1 10 ..	—
SOLDER—Plumbers' „	0 0 10 ..	—
Tinmen's „	0 1 1 ..	—
Blowpipe „	0 1 3 ..	—

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES.*

Per Ft. Delivered.

15 oz. thirds	2½d.	26 oz. fourths	3¾d.
„ fourths	2d.	32 oz. thirds	5½d.
21 oz. thirds	3¼d.	„ fourths	4¼d.
„ fourths	3d.	Fluted Sheet, 15 oz.	3d.
26 oz. thirds	4¼d.	„ 21 oz.	4d.

ENGLISH ROLLED PLATE IN CRATES OF STOCK SIZES.*

Per Ft. Delivered.

⅛ Rolled plate	2¼d.
⅛ Rough rolled and rough cast plate	2¾d.
⅛ Rough rolled and rough cast plate	3d.
Figured Rolled, Oxford Rolled, Oceanic, Arctic, Muffled, and Rolled Cathedral, white	3¼d.
Ditto, tinted	5d.

* Not less than two crates.

OILS, &c.

		£ s. d.
Raw Linseed Oil in pipes	per gallon	0 2 2
„ „ „ in barrels	„	0 2 3
„ „ „ in drums	„	0 2 5
Boiled „ „ in barrels	„	0 2 5
„ „ „ in drums	„	0 2 8
Turpentine in barrels	„	0 2 9
in drums	„	0 2 11
Genuine Ground English White Lead, (In not less than 5 cwt. casks.)	per ton	29 15 0
Red Lead, Dry	per ton	28 0 0
Best Linseed Oil Putty	per cwt.	0 9 0
Stockholm Tar	per barrel	1 12 0

VARNISHES, &c.

	Per gallon. £ s. d.
Fine Pale Oak Varnish	0 8 0
Pale Copal Oak	0 10 6
Superfine Pale Elastic Oak	0 12 6
Fine Extra Hard Church Oak	0 10 0
Superfine Hard-drying Oak, for seats of Churches	0 14 6
Fine Elastic Carriage	0 12 9
Superfine Pale Elastic Carriage	0 16 0
Fine Pale Maple	0 10 0
Finest Pale Durable Copal	0 18 6
Extra Pale French Oil	1 1 0
Eggshell Plating Varnish	0 18 0
White Pale Enamel	1 4 0
Extra Pale Paper	0 12 0
Best Japan Gold Size	0 10 0
Best Black Japan	0 16 0
Oak and Mahogany Stain	0 9 0
Brunswick Black	0 8 0
Berlin Black	0 16 0
Knotting	0 10 6
French and Brush Polish	0 10 0

TERMS OF SUBSCRIPTION.

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All drawings sent to or left at this office for consideration should bear the owner's name and address on either the face or back of the drawing. Delay and inconvenience may result from inattention to this.

Any communication to a contributor to write an article, or to execute or lend a drawing for publication, is given subject to the approval of the article or drawing, when received, by the Editor, who retains the right to reject it if unsatisfactory. The receipt by the author of a proof of an article in type does not necessarily imply its acceptance.

N.B.—Illustrations of the First Premiated Design in any important architectural competition will always be accepted for publication by the Editor, whether they have been formally asked for or not.

TENDERS.

Communications for insertion under this heading should be addressed to "The Editor," and must reach us *not later than* 6 p.m. *on Wednesday*. [N.B.—We cannot publish Tenders unless authenticated either by the architect or the building owner; and we cannot publish announcements of Tenders accepted unless the amount of the Tender is stated, nor any list in which the lowest Tender is under 100*l.* unless in some exceptional cases and for special reasons.]

* Denotes *accepted*. † Denotes *provisionally accepted*.

BURFORD.—Conversion of boys' school into mixed school, for the Oxfordshire County Council:—
Woolridge & Simpson, Oxford* £1,998 14 3

CANTON (Cardiff). — For the completion of St. Luke's Church, Canton, Cardiff, for the Rev. T. J. Richards, Vicar, and Committee. Mr. Geo. E. Halliday, F.S.A., architect, 9, Quay-street, Cardiff:—

H. Pittard & Son	£1,495 0 0	G. Cousens & Sons, Ltd.	£1,400 0 0
J. Gibson	1,494 0 0	R. E. J. Haines	1,395 0 0
W. Dunn	1,490 0 0	Bardo	1,384 7 2
D. Davies & Sons	1,490 0 0	Knox & Wells, Bangor-street, Roath, Cardiff	1,367 0 0
W. H. Evans	1,466 0 0	E. A. Bond & Co.	1,300 0 0
Symonds & Sons	1,424 0 0		
E. L. Price	1,420 0 0		
E. Turner & Sons	1,408 14 4		

CROWLAND.—For erection of new Wesleyan church. Mr. A. Brocklehurst, architect, Manchester:—
Cracknell, Peterborough* £3,067

DORCHESTER.—For erection of semi-detached houses, Victoria Park Estate. Messrs. Jackson, Son, & Fencey, architects, Dorchester:—

Jesty & Baker	£1,175	T. Conway, Ltd.	£1,085
A. E. Pickett	1,175	C. E. Slade, Dorchester‡	1,075
Watts Bros.	1,149		

[‡ Accepted subject to amendment.]

EASTBURY.—For rebuilding of Eastbury Bridge, for the Berkshire County Council:—
Steelwork: Horsehay Co.* £234 0 0
Brickwork: Langley & Johnson* 306 4 3

HONILEY (Warwickshire).—For the erection of buildings, for Mr. Herbert L. Wade. Mr. Chas. E. Bateman, F.R.I.B.A., architect, 18, Bennetts-hill, Birmingham:—

Redhouse	£16,034	G. F. Smith	£14,719
Benfield & Loxley	15,782	Grove	14,675
Poslin & Dickson	15,727	Bishop	14,577
J. Smith	15,600	Elvins	14,570
Kingerlee	15,574	Cleaver	14,557
Franklin	15,500	Crowder	14,429
T. W. Bowen	15,462	F. H. Smith	14,395
Wilcock	15,400	Bowens	14,396
Briley	15,300	Espley	14,000
Lowe	15,200	Moss	13,940
East Court	15,094	Barnsley	13,784
Parnell	15,078	Lord	13,744
Dallow	15,071	Gibbs	13,617
Whitehouse	15,060	Langley	13,440
Bell	14,880	Henson	13,473
Collins & Godfrey	14,812	Bragg	13,196
Sapcote	14,800		

REVISED ESTIMATES.

—	House and Outbuildings, etc. £ s. d.	Drainage. £ s. d.	Cottages and Stables. £ s. d.
Collins & Godfrey	10,949 0 0	635 0 0	3,178 0 0
Barnsley	10,266 0 0	503 0 0	2,954 0 0
Espley	10,246 0 0	580 0 0	2,876 0 0
Langley	9,880 0 0	597 0 0	2,969 0 0
Bragg, Solihull, Warwickshire	9,805 0 0‡	366 0 0‡	2,912 0 0‡

[‡ Accepted subject to 1½ per cent. discount.]

HOVE.—For enlarging the steam-roller sheds at Sackville-road Depôt, for the Corporation. Mr. H. Hamilton Scott, Borough Surveyor:—
A. Chadwell, 97, Blatchington-road, Hove* £215

HOUNSLOW.—For the erection of the Alexandra Schools. Mr. J. G. Carey, Surveyor, Urban District Council Offices, Hounslow :—

W. E. Blake, Ltd.	£16,975 0 0	J. Dorey & Co., Ltd.	£15,228 0 0
W. J. Dickens	16,197 0 0	A. & B. Hanson	14,995 0 0
S. Roberts, Ltd.	16,187 9 1	J. Kite	14,900 0 0
T. Millman	15,995 0 0	W. Lacey, Hounslow*	14,271 0 0
G. H. Gibson & Sons	15,362 0 0		

HOVE.—For erection of police-station and construction of underground lavatories in Norton-road, for the Town Council :—
McKellor & Westerman* ..... £2,(97

LEEK.—For culverts in road at Rudyard, for the Leek Rural District Council :—
S Salt* £307 10

LEWISHAM.—For making-up and paving part of Grove Park-road—the footways with artificial stone. Mr. E. van Putten, Borough Surveyor, Town Hall, Catford :—

—	Roadway. £ s. d.	Footways, at per yard super. s. d.
Woodham & Son	1,077 0 0*	—
T. Wood & Sons, Ltd.	1,081 0 0	—
Mowlem & Co., Ltd.	1,095 0 0	—
Fry Bros.	2,018 0 0	—
W. Pearce	2,021 0 0	4 3
Alexandra Paving Stone Co., Ltd.	—	4 0*
Atlas Stone Co., Ltd.	—	4 1½
Thames Stone Co., Ltd.	—	4 3

LITTLE MILL.—For alterations to the reformatory buildings, near Pontypool. Mr. G. E. Halliday, F.S.A., architect, Cardiff :—

E. L. Price	£4,707 0 0	Foster & Hill	£3,950 0 0
R. W. Moon	4,700 0 0	C. H. Reed	3,900 0 0
D. Davies & Sons	4,495 0 0	Knox & Wells, Bangor-street, Cardiff*	3,777 0 0
Vickery Bros.	4,446 3 9	T. Selby	3,619 17 0
Kirby & Wescott	4,200 0 0	J. Williams	2,924 15 6
J. Gibson	4,137 0 0		
R. H. Bardo	3,985 9 0		

LONDON.—For enlargement of Broadwater-road School for Mentally Defective Children, for the London County Council :—

F. W. Fletcher	£1,138 0 0	J. & C. Bowyer, Ltd.	£1,015 0 0
H. & E. Lea	1,111 0 0	J. Marsland & Sons	1,009 0 0
A. Leather	1,103 19 0	F. & G. Foster	975 0 0
W. Akers & Co., Ltd.	1,065 0 0	H. H. Hollingsworth, Batten's-yard, High-st., Peckham*	936 0 0
Lole & Co.	1,063 10 8		
Triggs & Co.	1,030 0 0		
Pasterfield & English	1,023 0 0		

LONDON.—For installing heating apparatus at Vernon-square School, Finsbury, for the London County Council :—

Palowkar & Sons	£1 568 0
J. C. Christie	1,44[illegible] 0
E. Deane & Beal, Ltd.	1,434 10
Wilson & Smith	1,415 0
J. Cormack & Sons, Ltd.	1,350 0
T. S. Knight & Sons	1,300 0
R. H. & J. Pearson, Ltd.	1,275 0
Brighside Foundry and Engineering Co., Ltd.	1,271 0
H. J. Cash & Co., Ltd.	1,208 0
W. Freer, 29, Holborn Hall, Gray's Inn-road*	1,150 0

LONDON.—For 6-ton steam road-roller with water-sprayer, for the Battersea Borough Council :—
Aveling & Porter, Rochester* £362 2 6

LONDON.—For alterations, etc., at Streatham depôt, for the Wandsworth Borough Council :—
R. A. Jewell* £215

LONDON.—For asphalting and draining at Buckingham Palace-road Laundry, for the Westminster City Council :—

Love & Co.	£205 0	French Asphalte Co., Ltd.	£170 0
Wright & Son	190 0	J. R. Sims	169 10
T. Coulthard	189 0	J. Smart & Co.*	140 0
Burton Bros.	187 0		
Bradshaw & Co.	187 0		

LONDON.—For the supply of from 15,000 to 20,000 6-in. by 3-in. by 4½-in. Jarrah blocks, for the Battersea Borough Council :—
Miller's Timber and Trading Co., Ltd., London,* at £9 9s. 6d. per thousand.

LONDON.—For 10-ton steam road-roller, for the Westminster City Council :—

Barford & Perkins	10-ton motor 3-axle	£725 0
	" " roller	568 0
Ruston, Proctor, & Co.*		438 15
Marshall & Sons		438 15
T. Green & Son		438 15
J. Fowler & Co.		4[illegible]8 15
C. Burrell & Son		438 15
Aveling & Porter, Ltd.		438 15

NORTHAMPTON.—Accepted for supply of granite, slag, and gravel, for the Rural District Council. Mr. George Wilcox, Surveyor, Duston, Northampton :—
Judkins, Ltd., Tuttle-hill, Nuneaton, 7s. 6d. to 10s. 6d. per ton delivered‡; Midland Quarry Co., Tuttle-hill, Nuneaton, 7s. 6d. to 10s. 4d. per ton delivered‡; Phipps & Co., Hunsbury-hill, Northampton, 5s to 8s. per ton delivered§; F. Ray, Bedford, 4s. 2d. to 5s. 4d. per ton delivered‖; Wadhams, Heyford, 2s. 6d. to 4s. 6d. per ton at pit.‖
‡ Broken granite. § Slag. ‖ Gravel.

ORSETT.—For sewer extension to Little Thurrock, for the Orsett Rural District Council :—
G. Hayward, Grays* £2,001 0 11

ROTHESAY.—For new gasholder, for the Town Council :—
Clayton, Son, & Co., Leeds* £7,957

ROTHESAY.—For installation of vertical retorts at gasworks, for the Town Council :—
Wests Gas Improvement Co.* £9,825

RUSHDEN.—For erection of working-class houses, for the Urban District Council :—
R. Marriott* ..... 28 houses at £206 5s. each.
W. Thompson* ..... 12 houses at £171 5s. each.

SOUTHAMPTON.—For reinforced concrete quay at Corporation Wharf. Mr. J. A. Crowther, Borough Engineer, Town Hall, Southampton :—

G. Trollope & Sons and Colls & Sons, Ltd.	£5,348 0 0
Anglo-Saxon Construction Co., Ltd.	4,994 15 6
D. G. Somerville & Co., Ltd.	4,888 10 0
J. L. Douglas-Smith	4,642 15 7
A. Jackaman & Son	4,567 0 0
Holloway Bros. (London), Ltd.	4,490 0 0
T. Wilson Lovatt	4,304 0 0
Playfair & Toole	4,138 0 0
J. Douglas	4,080 0 0
Concrete Piling, Ltd., London*	3,864 0 0

SOUTHAMPTON.—For sewage works in two roads. Mr. J. A. Crowther, Borough Engineer, Town Hall, Southampton :—

—	Bitterne-park. £ s. d.	Brookvale-road. £ s. d.
R. Richards	—	228 2 8
J. Nichol	377 0 0	—
F. Osman & Co.	329 0 0	216 0 0
J. Douglas	328 0 0*	199 0 0*

WALLINGFORD.—For a new lodge and entrance gates at the Bull Croft, Wallingford, for the Corporation. Mr. W. Honeybone, Borough Surveyor, Wallingford :—

Brasher & Sons	£367 5	S. G. Munday*	£331 10
J. Bartlett	340 5		

WREXHAM.—For extension of Rhosrobin-road sewer, for the Wrexham Rural District Council :—

T. Harris	£625	H. A. Jones	£490
Jukes & Co.	575	G. P. Trentham, Birmingham*	485
R. Williams	500		

YSTRADGYNLAIS.—For erection of fifty-eight houses, for the District Council, viz., twenty at Ystradgynlais, eighteen at Abercrave, and twenty at Colbren :—
H. Rogers & Sons, Cardiff* £13,754

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